

UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Friday, January 3, 1913.

Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, California,

Dear Crandall:-

I am very glad that you have landed the job that appealed to you, and trust that you are going to be happy as I know you will be useful therein.

I am sorry that I am delayed in answering your letter, due to my somewhat prolonged absence from the office. I have gone over your letter carefully and cannot make head or tail of the trouble with the low results on the Macrocystis, and am obliged to conclude that some of the efflorescences were lost at your end of the line or at this end. As we were in bad shape in the laboratory when they were received here, I think it quite possible that the loss occurred here, though I am unable to trace it positively. At any rate this is a matter of secondary importance. Your suggestion that samples be sent at regular inter-



(12)

San Diego, January 7, 1914.

Charles W. C. Campbell,  
1448 3rd Avenue,  
San Diego, California.

Dear Campbell:-

I am very glad that you have landed the  
job that appealed to you, and trust that you are  
going to be happy as I know you will be useful  
therein.

I am sorry that I am delayed in answer-  
ing your letter, due to my somewhat prolonged ab-  
sence from the office. I have gone over your let-  
ter carefully and cannot make head or tail of the  
trouble with the law results on the Mexican side,  
and am obliged to conclude that some of the effort-  
ences were lost at your end of the line or at  
this end. As we were in and about the labor-  
tory when they were received here, I think it  
quite possible that the loss occurred here, though  
I am unable to trace it positively. At any rate  
this is a matter of secondary importance. Your  
suggestion that samples be sent at regular inter-



(C+a)

Crandall:-

vals through the year is a good one and as soon as I can get matters straightened out here a little better than they now are I shall see if we can make an arrangement with you to furnish us these samples at regular intervals and also act as a general agent for us on the Southern Coast, at least for a year which is the period that I foresee we will still want to work on kelp. After that I dare not predict.

I will be glad to hear what you find out from the Pacific Kelp Mulch Company. We have had several letters from a Mr. Ennis of Los Angeles, who seems to be very much interested, and I would be glad if you would get in touch with him and find out what he is doing. It is somewhat a formidable matter to arrange an appointment to cover a short trip, but if my plan can be carried out of giving you a continuous appointment as a Collaborator of the Bureau of Soils these matters can be easily taken care of in the future.

Thank you very much for your good wishes. I have just returned to my office to day and have not yet seen Dr. Turrentine, but will see that your message to him is transmitted.

Sincerely,

*Frank A. Peterson*  
In Charge.



(54)

Trinidad:-

While through the year is a good one and we should be  
I am not matter strengthened out here a little  
better than they now are I shall see if we can  
make an arrangement with you to furnish us these  
samples at regular intervals and also act as a con-  
sulting agent for us on the Government point, at least  
for a year which is the period that I foresee we  
will still want to rely on help. After that I dare  
not predict.

I will be glad to hear what you think of  
from the Pacific Mail Company. We have had  
several letters from a Mr. Smith of Los Angeles,  
who seems to be very much interested, and I would  
be glad if you would get in touch with him and  
find out what he is doing. It is somewhat  
formidable matter to arrange an expedition to  
make a short trip, but if you plan can be arranged  
out of giving you a confidential report as a  
collaborator of the Bureau of soils these matters  
can be easily taken care of in the future.  
Thank you very much for your good wishes.

I have just returned to my office to day and have  
not yet seen Mr. Turrell, but will see that your  
message to him is transmitted.

Sincerely,

*James H. Thompson*  
In Charge.

Page  
Two



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Saturday, January 4, 1913.

Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, Cal.,

Dear Crandall:-

Your letter of December 27, with the newspaper clippings, just at hand, and I am much interested in the results of your visit to points about Los Angeles.

I presume that it would be wise to correct the MS of our report as regards the Coronada Chemical Company, and if you think this is the correct thing to do I will make the changes on the basis of your letter. The preparation of the maps is progressing fairly well, but it will be some weeks yet before we can turn the report in to the Bureau of publications. I have never

I have never heard of your friend, F. C. Axtell, Ph. D., although he is a chemical engineer of world wide reputation. It would be wise to keep



San Diego, January 4, 1917.

(10-1)

Captain F. C. Crandall,  
2401 5th Avenue,  
San Diego, Cal.

Dear Crandall:-

Your letter of December 27, with the news-  
paper clippings, just at hand, and I am much inter-  
ested in the results of your visit to points about  
Los Angeles.

I presume that it would be wise to correct  
the MS of our report as regards the Colorado Chem-  
ical Company, and if you think this is the correct  
thing to do I will make the changes on the basis  
of your letter. The presentation of the map is pro-  
ceeding fairly well, but it will be some weeks yet be-  
fore we can turn the report in to the Bureau of  
Publications.  
I have never heard of your friend, F. C.  
Antell, Jr., although he is a chemical engineer  
of world wide reputation. It would be wise to keep



(c+a)

Crandall:--

your eye on him. I am not favorably impressed by the style of newspaper notice he is receiving and suspect that it is another stock-jobbing proposition. However, I hope not.

Yours very truly,

*Frank A. Cameron*

In Charge.



(10-2)

Enclosed:--

Your eye on him. I am not favorably impressed by  
the style of newspaper notice he is receiving and  
suspect that it is another stock-jobbing propa-  
ganda. However, I hope not.

Yours very truly,

In Charge.

Page  
two

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UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

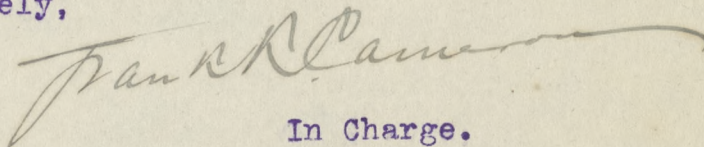
Monday, January 6, 1913.

Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, California,

Dear Crandall:--

I have just received through Dr. Parsons of the Bureau of Mines a letter from Dr. Axtell which inclines me to think more favorably of him than the reference in my last letter to you would indicate. I infer from his letter to Parsons that he is unaware of our work on the Coast; hence the tone of the newspaper notices. I have written Dr. Axtell, suggesting that he get into communication with you who can give him first hand information regarding conditions on the Coast.

Yours sincerely,



In Charge.



Monday, January 6, 1913.

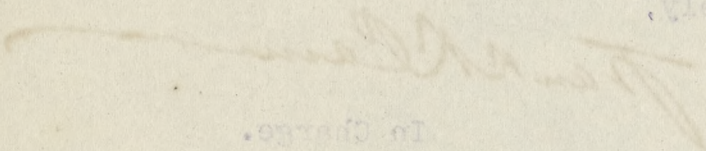
(1043)

Captain W. G. Orndorff,  
3408 8th Avenue,  
San Diego, California.

Dear Orndorff:--

I have just received through Mr. Parsons  
of the Bureau of Mines a letter from Mr. Axel  
which inclines me to think more favorably of him  
than the reference in my last letter to you would  
indicate. I infer from his letter to Parsons that  
he is aware of our work on the Coast; hence the  
tone of the newspaper notices. I have written Dr.  
Axel, suggesting that he get into communication  
with you who can give him first hand information  
regarding conditions on the Coast.

Yours sincerely,

  
In Charge.



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Friday, January 24, 1913.

Captain W. C. Crandall,  
Marine Biological Association,  
San Diego, California,

Dear Crandall:--

Our Bill has now been reported to the House. The appropriation for the fertilizer work is the same as last year, and we are now able to form some idea as to what we are going to be able to do. In thinking the matter over, it seems to me that it would be desirable for us to have a definite connection with you as a local agent on the Pacific coast, and I have thought, if it meet with your approval, to recommend to the authorities here that you be appointed a Collaborator of this Bureau at a nominal honorarium of \$100 per annum. In return for this we would expect you to send us monthly samples of *Macrocystis* plants from some of the important beds in your neighborhood, and from time to time, if it should prove desirable, we could call upon you to make short trips to look



Friday, January 24, 1913.

(c+s)

Captain W. C. Stendall,  
Marine Biological Association,  
San Diego, California.

Dear Stendall:--

Our Bill has now been reported to the House. The appropriation for the fertilizer work is the same as last year, and we are now able to form some idea as to what we are going to be able to do. In thinking the matter over, it seems to me that it would be desirable for us to have a definite connection with you as a local agent on the Pacific coast, and I have thought, if it meet with your approval, to recommend to the authorities here that you be appointed a Collaborator of this Bureau at a nominal honorarium of \$100 per annum. In return for this we would expect you to send us monthly samples of Macrogygia plants from some of the important beds in your neighborhood, and from time to time, if it should prove desirable, we could call upon you to make short trips to look



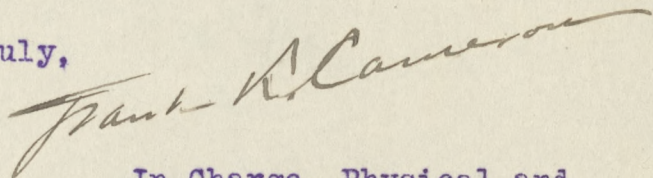
(c+a)

Crandall:---

into points on which we may wish to be advised or informed regarding the commercial development of the kelp industry. We would of course pay your actual expenses when traveling for us.

If this arrangement would be satisfactory to you and you will so advise me, I will take it up promptly with the Chief of the Bureau with a view of making the arrangement effective as soon as practicable.

Yours very truly,

A handwritten signature in cursive script, reading "Frank H. Cameron". The signature is written in dark ink and is positioned above the typed name.

In Charge, Physical and  
Chemical Investigations.



(c-2)

Grandall:---

into points on which we may wish to be advised  
or informed regarding the commercial development  
of the kelp industry. We would of course pay  
your actual expenses when traveling for us.  
If this arrangement would be satisfactory

to you and you will so advise me, I will take it  
up promptly with the Chief of the Bureau with a  
view of making the arrangement effective as soon  
as practicable.

Yours very truly,

In Charge, Physical and  
Chemical Investigations.



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Wednesday, January 29, 1913.

Captain W. C. Crandall,  
3468 3rd Ave.,  
San Diego, Cal.,

Dear Crandall:-----

Thank you very much for your letter of January 20 with the information about Brander's company. I have written him asking him to give me all information concerning it which he feels he can. The maps for last year's work are pretty nearly complete, and of course the manuscript of the report has been ready for some time, but with this more recent information I will change the statements in your report regarding the companies at work and bring it up to date, and you can make any corrections in the proof which will be sent you in due course of time.

I am much interested in what you say about Dr. Swain's work in connection with the kelp, and will write to him before long. Conditions have so developed here that it seems very unwise if not impracticable for us to consider any work in connection with the



Wednesday, January 29, 1913.

(c-8)

Captain W. C. Grandall,  
3408 Ave. ...  
San Diego, Cal.

Dear Grandall:-----

Thank you very much for your letter of Jan-  
uary 20 with the information about Brander's company.  
I have written him asking him to give me all infor-  
mation concerning it which he feels he can. The maps  
for last year's work are pretty nearly complete, and  
of course the manuscript of the report has been ready  
for some time, but with this more recent information  
I will change the statements in your report regard-  
ing the companies at work and bring it up to date,  
and you can make any corrections in the proof which  
will be sent you in the course of time.  
I am much interested in what you say about  
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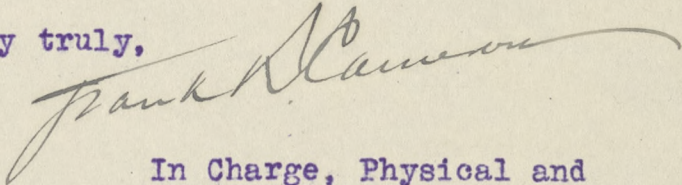


(c)a

Crandall:

kelp outside of the potash end of it. But of course we are interested in anything connected with the kelp which looks as if it might have an influence, even a remote one, on the development of the kelp industry. I had hoped to be able to arrange some work with Prof. Setchell and a proper compensation, but these conditions above cited make this impracticable so far as I am able to see, and for the present at least we will have to confine ourselves to locating and mapping the kelp groves and determining their potash possibilities.

Yours very truly,

A handwritten signature in cursive script, reading "Frank A. Cameron". The signature is written in dark ink and is positioned above the typed name.

In Charge, Physical and  
Chemical Investigations.



(c)2

Grandall

help outside of the potash end of it. But of course we are interested in anything connected with the help which looks as if it might have an influence, even a remote one, on the development of the help industry. I had hoped to be able to arrange some work with Prof. Setchell and a proper compensation, but these conditions above cited make this impracticable so far as I am able to see, and for the present at least we will have to confine ourselves to locating and mapping the help groves and determining their potash possibilities.

Yours very truly,

In Charge, Physical and  
Chemical Investigations.



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Tuesday, February 4, 1913.

Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, Cal.,

Dear Crandall:--

The manuscript and maps of the report of last year's work are about ready to send off to the printer, but in putting the finishing touches on the report we have gotten badly mixed up on the sketch of the cutting device of the Pacific Kelp Mulch Company. One of our draftsmen has tried to redraw it in a manner more likely to convey ideas to laymen like myself who have never actually seen the cutter, and he finds himself in distress because he cannot make out from the sketch and photographs sent us certain points which are covered in a set of questions which we are sending you under separate cover, accompanied by the drawing. If you will look these questions over at your earliest convenience and advise us if anything is wrong and answer the questions, I would be greatly obliged as we



San Francisco, California, February 4, 1912.

San Francisco, California,  
1234 5th Avenue,  
San Francisco, Cal.

Dear Sirs:

The manuscript and maps of the report of  
last year's work are about ready to send off to the  
printer, but in getting the finishing touches on  
the report we have gotten badly mixed up on the  
sketch of the setting basin of the Pacific Mail  
which company. One of our draftsmen has tried to  
show it in a manner more likely to convey the  
impression like myself who have never actually seen  
the matter, and he thinks himself in a position to  
show he knows more about it than the sketch and plan  
which sent us certain points which are covered in  
a set of questions which we are sending you under  
separate cover, accompanied by the drawing. If you  
will look these questions over at your earliest con-  
venience and advise us if anything is wrong and un-  
der the questions, I would be greatly obliged as we

WATERBURY CO.  
WOLF & CO.



(c+a)

Crandall:---

are anxious to hurry the report off. Anything else you can suggest to throw light on this matter will be welcomed.

Sincerely yours,

*Frank McCammon*

In Charge, Physical and  
Chemical Investigations.

*It is probable that I will visit you in April but not certain. Meanwhile keep me posted on any commercial developments regarding kelp. Have you thought over the proposition to become a collaborator?*

*Frank*



(over)

Original:—

are anxious to hurry the report off. Nothing else  
you can suggest to throw light on this matter will  
be welcomed.

*Wm. Brewster*  
In Charge, Biological  
Chemical, Washington

It is probable that I will visit you in  
April but not certainly. When will I stop  
the first on my commercial tour?  
regarding help. When you touch on the top  
again to become a collaborator?  
*Wm.*

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UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Thursday, February 6, 1913.

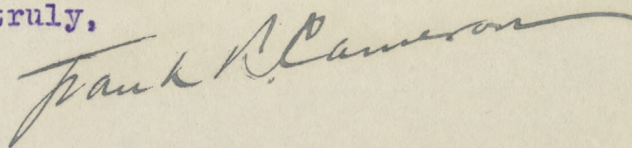
Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, California,

Dear Crandall:---

Yours of the 31st reached me yesterday, and I promptly took the matter up with the authorities here. In all probability we will be able to put through an appointment for you as Collaborator in the next few days.

I have not yet heard from Mr. Brander. I wrote him a letter care of his new company at Los Angeles which was returned, and have again written him in care of the Coronada Chemical Company. It appears to be very difficult to get satisfactory data on the prospects of the kelp industry by correspondence alone, and I shall probably be on the Coast the latter part of March or early in April, and of course will count on conferring with you. I will write you later when the plans assume more definite shape.

Yours very truly,



In Charge, Physical and  
Chemical Investigations.



Thursday, February 6, 1913.

(c.s.)

Captain W. C. Grandall,  
3468 3rd Avenue,  
San Diego, California.

Dear Grandall:---

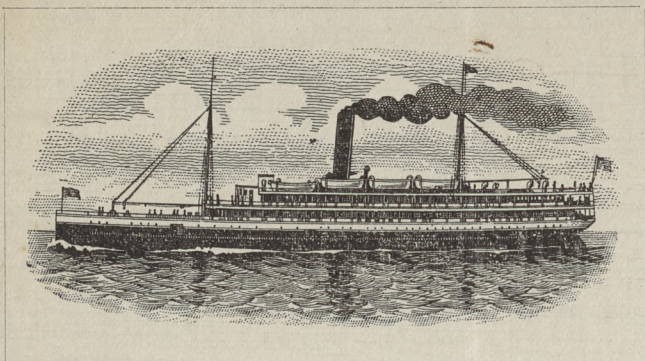
Yours of the 31st reached me yesterday, and I promptly took the matter up with the authorities here. In all probability we will be able to put through an appointment for you as Collaborator in the next few days.

I have not yet heard from Mr. Brander. I wrote him a letter care of his new company at Los Angeles which was returned, and have again written him in care of the Coronado Chemical Company. It appears to be very difficult to get satisfactory data on the prospects of the kelp industry by correspondence alone, and I shall probably be on the coast the latter part of March or early in April, and of course will count on conferring with you. I will write you later when the plans assume more definite shape.

Yours very truly,

In Charge, Physical and  
Chemical Investigations.





Phones: SAN PEDRO 272 W 1. SUNSET  
WILMINGTON 2061, HOME

# The Harbor Sales Company

OF GREATER LOS ANGELES  
WILMINGTON DOCK CO. BUILDING

GENERAL MANUFACTURERS' AGENTS

Wilmington (P. O.), California.

2/13/13

Prof Crandall

San Diego

Cal

*Ans 2/7/13*

Dear Sir. Can you supply me with information of the uses and  
value of Kelp or sea weed ?

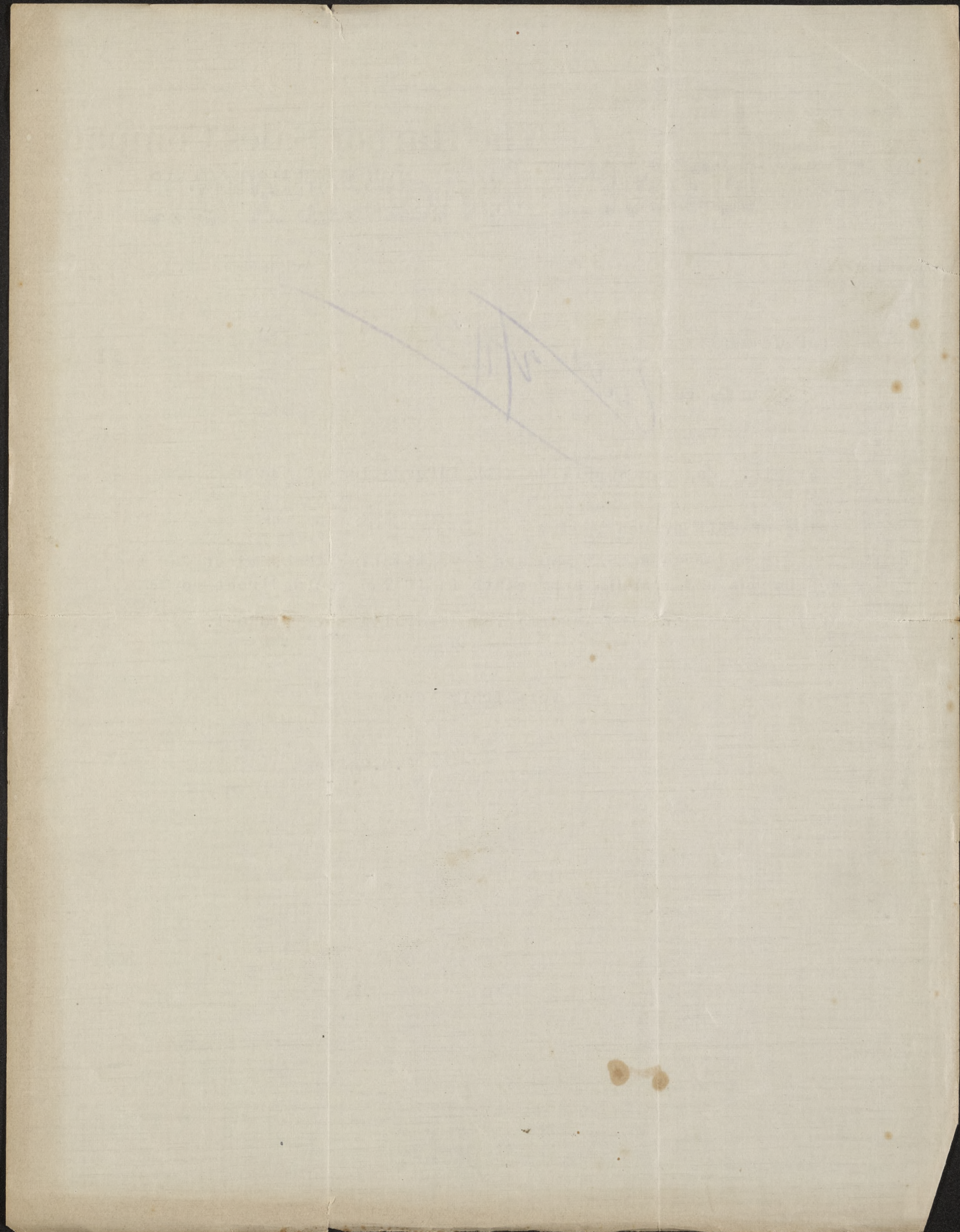
I understand that you are investigating the subject for the  
government and I would appreciate it if you could direct me to  
definite and detailed information regarding this product.

Very Truly Yours

E.O.Bailey

*[Handwritten signature/initials]*







UNIVERSITY OF WASHINGTON  
THOMAS F. KANE, PRESIDENT

SEATTLE, WASH., Feb. 17, 1913.

Prof. W. C. Grandall,  
San Diego Normal School,  
San Diego, Cal.

My dear Dr. Grandall:

I am enclosing a copy of the proposed kelp law which has been introduced into the Washington Legislature. This bill was prepared by the State Land Commissioner and his attorney after a conference with some parties who are interested in the utilization of kelp and myself. I am not sure that it is quite stringent enough in regard to the restrictions as to the time of year at which kelp may be cut and it is possible that the total amount that can be controlled by one individual or corporation is slightly too large. Otherwise than this I see no objection to the bill. We shall not oppose the passage because the above points are covered in a way by leaving them to the discretion of the Land Commissioner, and I feel no doubt at all about their being well handled so long as Mr. Savidge, our present commissioner, occupies the office.

Very sincerely yours,

Geo. B. Rigg



RECEIVED  
JAN 10 1900

RECEIVED  
JAN 10 1900

RECEIVED  
JAN 10 1900



Officers and Directors

R. A. GUTHRIE, President  
J. M. SHINER, Sec-Treas.  
E. C. SHINER, Vice-Pres. Traffic Mgr.  
H. L. DIETCHER, Factory Supt.  
JOHN F. POOL  
E. W. KAPP  
C. C. CURTIS, M. D.

PHONE MAIN 8430

# Pacific Kelp Mulch Co.

INCORPORATED  
MANUFACTURERS OF

## Kelp Mulch and Kelp Products

Factory, Warehouse and Wharfrage  
TERMINAL ISLAND

General Offices  
335-36 Union Oil Building  
LOS ANGELES, CAL.

Los Angeles, Cal., Feb'y 20, 1913.

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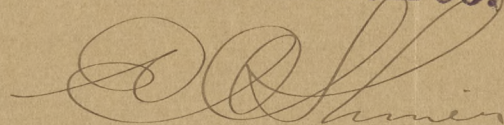
Mr. W. C. Grandall,  
San Diego, Cal.

Dear Mr. Grandall:

I do not know at this time whether the boys will go out for kelp Sunday, or not, but at any rate, they will return between 2 and 3 p.m. and this will give you ample time to make the drawings you desire. If Mr. Lowman is not acquainted with you, kindly present this letter, which will secure you desired courtesies.

Respectfully,

PACIFIC KELP MULCH CO.





1

Public Key-Match Co.

Key-Match and Key-Match

Key-Match and Key-Match





Dear Crandall

I am enclosing Memorandum of expenses. I presume there is something to be subtracted for various expenditures by you.

Also I presume, on the face of it, this is going to run you about the \$4<sup>20</sup> per day, but trust you can fix it straight by putting in proper charges for telephone car service etc. before sending your check to Wolf. Subtract what is proper from the enclosed and send me check to New



Washington Hotel, Seattle. We  
have continued to have a  
spacious time since we parted  
from you. We leave tomorrow for  
Sacramento via river boat and I  
am hoping to rest a little. The  
pace is killing.

We are greatly indebted to you  
but then you know and I trust  
also our appreciation of the  
same. Grop joins me in  
affectionate salutations and  
hopes for another bully time  
together

Yrs Sincerely

April

Frank Cameron

1910



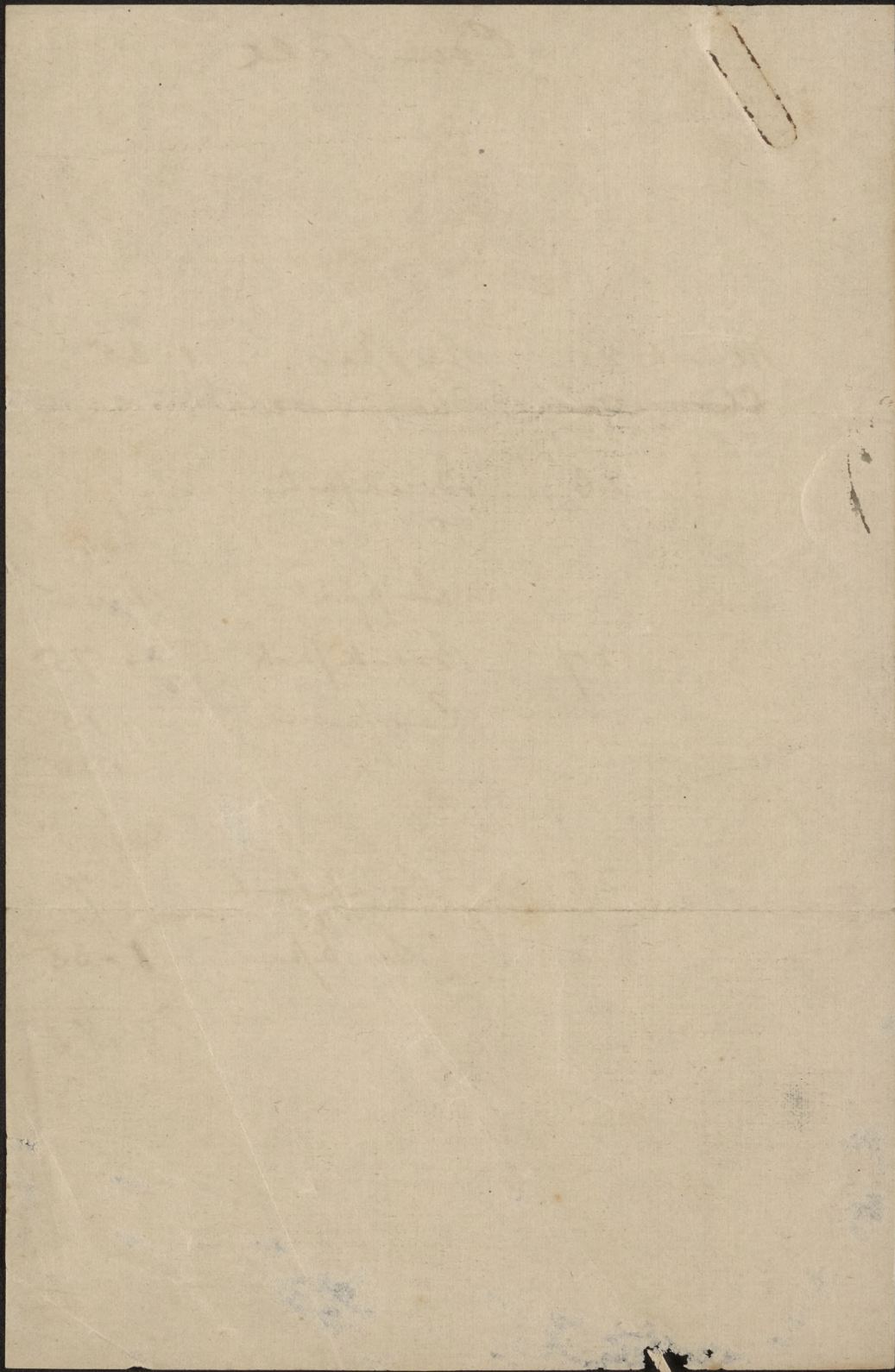


Crandall



March 25	Supper	1.35 ✓
<del>Chair car</del>	<del>Chair car</del>	<del>.50 ✓</del>
26	Breakfast	.75 ✓
	Carfare	.35 ✓
	Supper	1.40 ✓
27	Breakfast	.75 ✓
	Carfare	.15 ✓
	"	.20 ✓
	Supper	1.25 ✓
28	Breakfast	.40 ✓
	Supper	1.35 ✓
		<hr/> 8.75







Dr. Frank K. Cameron,

Apr. 26th 1913

Washington, D.C.

My dear Dr. Cameron:

I am sending by mail and by express the following samples:

AB Beach Sand. Taken from the front of the Station as you remember the sand was of a peculiar type there.

Sta. #4 Mexican Trip. Kelp taken and put in a net and left in the water so that the rate of the leaching might be determined. This kelp was sampled at various times as noted in the summary.

Sample #1	Apr 16	2.30 P.M.	Portion dried	Sent by mail.
1	" "	" "	put in jar	" " Express.
1A	" "	5.30 "	" " "	" " "
1B	" "	8.30 "	" " "	" " "
1C	" 17	4.30 A.M.	" " "	" " "
1D	" "	7.30 "	" " "	" " "
1E	" "	10.30 "	" " "	" " "
1F	" 16	2.30 P.M.	Leaves only of sample #1.	Mail
1G	" "	" "	Leaves " " "	#1. " "

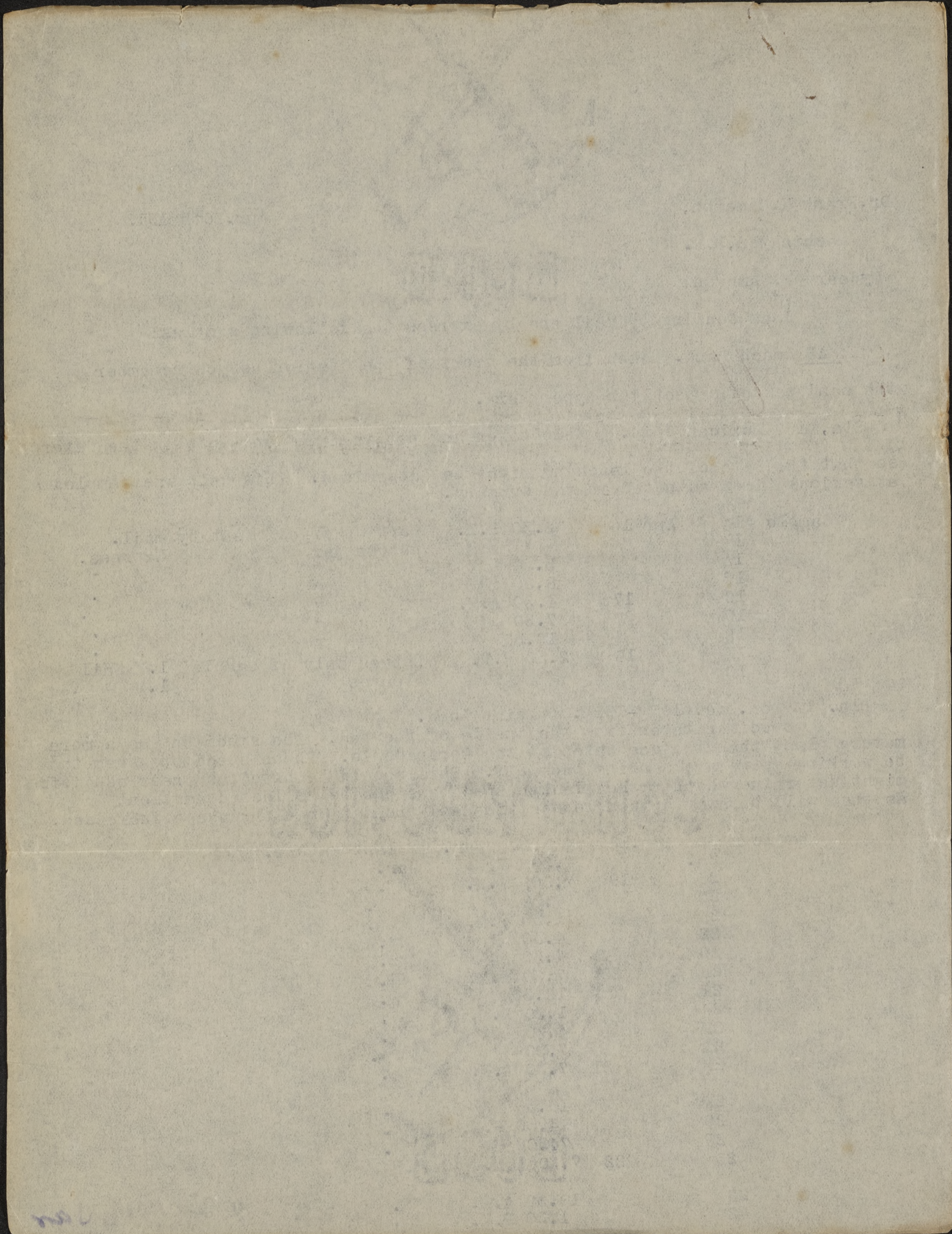
Sta. #1 Sen. Dec. #190 -1912. Point Loma.

Specimen taken from the inside of the bed. The specimen was a more mature plant than the one taken at the Coronado Is. These specimens seem to be working as we are sending them off. This should be noted as their condition might determine whether the Alaskan specimens can be collected and sent in as they will be away a much longer time and the danger of breakage increased.

Sample #	2A	Apr. 18	4 P.M.	Jar.	Plant mature.
	2B.		7.30 P.M.	Jar.	
	2C	19	7.30 A.M.	"	
	2D		10.30 "	"	
	2E		1.30 P.M.	"	
	2E2		4.30 "	" 2	
	2G		7.30 "	"	
	2H	" 20	7.30 A.M.	"	
	2I		10.30 "	"	
	2J		1.30 P.M.	"	
	2K		4.30 "	"	
	2L		7.30 "	"	
	2M	" 21	7.30 A.M.	"	
	2N		10.30 "	"	
	2O		4.30 P.M.	"	
	2P		7.30 "	"	
	2Q	22	7.30 A.M.	"	
	2R		10.30 A.M.	"	
	2S		1.30 P.M.	"	

2T 4.30 P.M. Jar







#2. F.K.C.

2U	Apr. 22	7.30 P.M.	Jar.
2V	23	7.30 A.M.	" "
2W	24	7.30 A.M.	" "

2 Apr 23 Specimen dried that had been in the water since the 18th at 4 P. M. Sent by mail.

Mold and fermentation seem to be the principle factors against sending the specimens in jars. Drying in the open air is almost an impossibility in foggy weather and in rough weather unless one can lay inat some point and dry the specimens.

If neither the jars or sun drying can be used I would suggest that a small kiln be fitted up and carried on the work and the ash sent to the Dept.

Dr.Cameron, it would be well I think for you to get into correspondence with Mr.J.S.Neff Anaheim,Cal. and Dr.S.S.Twombly, Twombly Ranch, Fullerton,Cal. They are the University lecturers for the Farmers Institutes in the Southern part o f Cal. I think that they are against the kelp. At least I should judge so from a few minutes talk with Dr. Twombly last night. As he was going out of town this morning and I met him at a social gathering I could not talk to him at length.

Yours truly,



This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf from an old book. The paper has a slightly textured appearance with some minor discoloration and faint, dark smudges or stains, particularly towards the bottom edge. The lighting is even, highlighting the natural texture of the paper.



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Monday, April 28, 1913.

Captain W. C. Crandall,  
Marine Biological Association,  
San Diego, California,

Dear Crandall:---

Your letter of April 4 has followed me in. The note regarding your portion of the expense which I sent you was to the best of my knowledge correct. As the difference between that and your check was small and as I have forgotten what the amount and memorandum were, I have cashed your check, and will try to make up the difference to you as soon as I get my accumulated work out of the way and can think over the details.

I left Turrentine at Seattle with the expressed determination to sleep for the next two days after my departure. I got after Frye regarding Captain Dahl whom he stated he had missed but would certainly make every effort to see before going away. I had quite a seance with the Berkeley people with the final result that they have agreed to look into the kelp matter and encourage its development as much as practicable. On the whole I think the situation is fairly satisfactory, the most se-



Monday, April 22, 1913.

(c.s.)

Captain W. G. Crandall,  
Marine Biological Association,  
San Diego, California.

Dear Crandall:---

Your letter of April 4 has followed me in.  
The note regarding your portion of the expense which  
I sent you was to the best of my knowledge correct.  
As the difference between that and your check was small  
and as I have forgotten what the amount and memorandum  
were, I have cashed your check, and will try to make  
up the difference to you as soon as I get my account-  
lated work out of the way and can think over the details.  
I left Trenton at Seattle with the expressed  
determination to sleep for the next two days after my de-  
parture. I got after five regarding Captain Dahl whom  
he stated he had missed but would certainly make every  
effort to see before going away. I had quite a session  
with the Berkeley people with the final result that they  
have agreed to look into the kelp matter and encourage  
its development as much as practicable. On the whole I  
think the situation is fairly satisfactory. The most se-



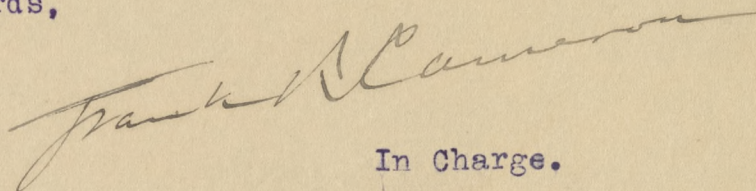
(c+a)

Crandall:---

rious difficulty at present being the fact that the publication of our work of last year is temporarily held up because of lack of funds in the printing allotment for the Department, and it may be the coming fall before the publication is available. By that time the ~~press and~~ text will probably be much out of date and there will be a good many proof corrections, but that is something we cannot help.

With best regards,

Sincerely,

A handwritten signature in cursive script, reading "Frank A. Cameron". The signature is written in dark ink and is positioned to the right of the typed name.

In Charge.



111

111

111

the difficulty of our work is not the fact that we  
have a large number of our work of last year to re-prepare  
up to date as of the 1st of July in the following manner  
the Department, and the way the working staff has  
been able to do this is by the use of the  
new and improved method of working which has been  
developed by the Department, and which has been  
found to be a very good one.

Very truly,  
Yours,  
Sincerely,  
111

111

111

111



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Wednesday, February 19, 1913.

Captain W. C. Crandall,  
3468 3rd Avenue,  
San Diego, California,

Dear Crandall:---

Your letter of February 12 and the drawing of the P. K. M. Company's cutter came Saturday. After puzzling over the latter I came to the conclusion that we would have to abandon it for the report, and yesterday Prof. Whitney wired you for me, directing you to get blue prints of working drawings and photographs of the cutter if you can and to go to San Pedro for the purpose if necessary. Probably the telegram will reach you before the letter of authorization covering your appointment as a collaborator, but we will fix it up for you in some way or other. I will let you know later when to expect me.

We are having the deuce of a time getting the maps finished for the report of last year's work. I have just heard from the draftsmen that they hope to have them finished by the last of March, but after leaving the office I met one of the individuals at work on them who had banged a knee and was going home, so it looks as if Providence were against us. I am hoping





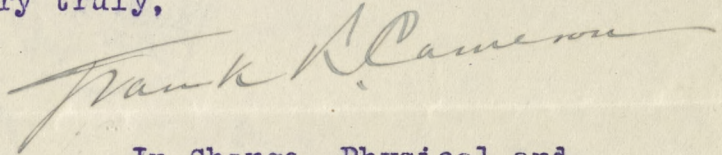


(c+a)

Crandall:---

for the best and that some day you will see the results  
of your work in print.

Yours very truly,

A handwritten signature in cursive script, reading "Frank R. Cameron". The signature is written in dark ink and is positioned above the typed name.

In Charge, Physical and  
Chemical Investigations.



11

(c.c.)

---:---

For the best and that some day you will see the results  
of your work in print.

Yours very truly,

*[Handwritten signature]*

In Charge, Physical and  
Chemical Investigations.

MADE BY  
VALLEY PARK CO



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Monday, May 5, 1913.

Captain W. C. Crandall,  
The Scripps Biological Institution,  
La Jolla, California,

Dear Crandall:---

Yours of the 26th ultimo, with description of the samples sent in is at hand, and Lindemuth and Merz are on the look-out for the samples and will acknowledge them promptly on their arrival. We have had some little trouble heretofore with the mold and fermentation as you note but it has seldom been serious. In any event we will be on the lookout for it. I am glad that you have been able to get to work on the matter of leaching the cut kelp so promptly, and as soon as we get the analytical results we will send them to you for your information.

The sample of beach sand arrived safely and an examination of it showed it to be mainly magnetic oxide of iron with the <sup>usual</sup> beach sand minerals present but in much less quantity than usual. The sample is quite interesting as showing that there must be a large amount of magnetite in the soil around your station at La Jolla, but we are absolutely in the air as to what significance this fact may



Monday, May 5, 1913.

(c+2)

Captain W. C. Crandall,  
The Scripps Biological Institution,  
La Jolla, California.

Dear Crandall:---

Yours of the 26th ultimo, with description of the samples sent in is at hand, and Lindemann and Mers are on the look-out for the samples and will acknowledge them promptly on their arrival. We have had some little trouble heretofore with the mold and fermentation as you note but it has seldom been serious. In any event we will be on the lookout for it. I am glad that you have been able to get to work on the matter of leaching the out keep so promptly, and as soon as we get the analytical results we will send them to you for your information.

The sample of beach sand arrived safely and an examination of it showed it to be mainly magnetic oxide of iron with the beach sand minerals present but in much less quantity than usual. The sample is quite interesting as showing that there must be a large amount of magnetite in the soil around your station at La Jolla, but we are absolutely in the air as to what significance this fact may



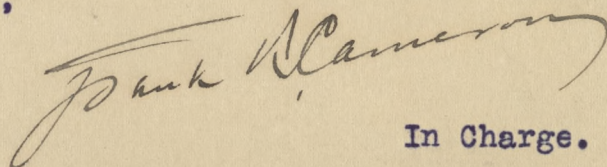
(c+a)

Crandall:---

have for agriculture. It is merely one more bit of evidence that magnetite is a very resistant mineral in spite of the fact that it contains ferrous iron. I will write to Rigg and to Frye giving your suggestion regarding drying the Alaska kelps, and if drying should be impracticable that they prepare samples of ash. I think, however, that they have the matter well in mind now and am looking for some interesting and valuable results. I am also taking steps to have one of the graduate students at Friday Harbor send us in samples of the kelps near there at regular intervals for some months to come at least if not for a year, so that we will have a line on the change in composition, if any, of the Nereocystis in that neighborhood as well as the data for your kelps.

I am writing at once to Messrs. Neff and Twombly as you suggest. I think I told you in a previous letter that I not only saw <sup>Dean</sup> Hunt on my way north but stopped at Berkeley on my way back to Washington and had a conference with Setchell, ~~Byrde~~, Lippman and one or two others with the result that they, or rather Byrde, agreed to take up the kelp matter anew and gave me the impression that he would probably have a much more liberal attitude toward it.

Yours very truly,

Frank Cameron

In Charge.



Crembell:---

have for agriculture. It is merely one more bit of evidence that magnetite is a very resistant mineral in spite of the fact that it contains ferrous iron. I will write to Riggs and to try giving your suggestion regarding drying the Alaska kelps, and it drying should be impracticable that they prepare samples of ash. I think, however, that they have the matter well in mind now and am looking for some interesting and valuable results. I am also taking steps to have one of the graduate students at Friday Harbor send us in samples of the kelps near there at regular intervals for some months to come at least if not for a year, so that we will have a line on the change in composition, if any, of the *Nereocystis* in that neighborhood as well as the data for your kelps.

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Yours very truly,



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Thursday, May 8, 1913.

Captain W. C. Crandall,  
Scripps Biological Association,  
La Jolla, California,

Dear Crandall:--

Dr. Fry has finished the examination of the black material collected from the beach behind the buildings at La Jolla and finds it to be mainly magnetite, there also being present a slight amount of quartz, garnet, epidote, hornblende, calcite, apatite, zircon, monazite, rutile. There are present also some clouded minerals whose identity were not definitely determined as it did not seem worth while to pursue the investigation further. The most striking feature presented by the minerals is the practicable absence of feldspars, these being present if at all in extremely small quantities, and in this feature the material is distinguished from ordinary soils as well as by the enormously large proportion of magnetite.

The samples of kelp have all come and many of them are quite strong enough to make their presence obvious when the jars are opened. Lindemuth has been drying them out and we will go ahead with the analysis of them as soon as practicable and let you know the results.



Thursday, May 8, 1913.

(144)

George W. C. Orinelli,  
George Biological Association,  
La Jolla, California.

Dear Orinelli:--

Dr. Fry has finished the examination of the black material collected from the beach behind the building at La Jolla and finds it to be mainly magnetite, there also being present a slight amount of quartz, garnet, epidote, hornblende, calcite, apatite, zircon, monazite, rutile. There are present also some clouded minerals whose identity were not definitely determined as it did not seem worth while to pursue the investigation further. The most striking feature presented by the minerals is the practically absence of feldspars, these being present in all in extremely small quantities, and in this feature the material is distinguished from ordinary soils as well as by the enormously large proportion of magnetite. The samples of help have all come and many of them are quite strong enough to make their presence obvious when the jars are opened. Lindemann has been drying them out and we will go ahead with the analysis of them as soon as practicable and let you know the results.



(c+a)

Crandall:---

Frye and Rigg have both gotten off for Alaska. I think I advised you that Gardner, the Los Angeles man, backed out and did not go. He is to be an instructor with Setchell next year at Berkeley. A man named Wiley, very strongly recommended by both Rigg and Frye, took his place. I have this morning heard from Turp who saw them off, and he seems to think that the restricted quarters on the boat Frye has will interfere with the best success of the party, but I am hoping that his fears are groundless. The boat is apparently a very sea-worthy one with a good practical man as captain, and while there may be a good deal of discomfort aboard of her, I imagine they will be so busy with their work that they won't have much time to think about roomy quarters.

I have written to the two men mentioned in your last letter regarding their attitude towards kelp and will advise you when I hear from them. I have also had a letter from Mr. Balch who, it now appears, patented the idea of using dried kelp some years ago and is drifting around to the view that this material may possibly be the correct thing to market after all. We will of course give him credit in our next publication, but I am sorry to say that I am unable to see how the old gentleman will be able to get anything out of his patent.

Yours very truly,

Dr. George.



Grandall:---

Trye and Higby have both gotten off for Alaska. I think I advised you that Gardner, the Los Angeles man, backed out and did not go. He is to be an instructor with Setchell next year at Berkeley. A man named Wiley, very strongly recommended by both Higby and Trye, took his place. I have this morning heard from Turp who saw them off, and he seems to think that the restricted quarters on the boat Trye has will interfere with the best success of the party, but I am hoping that his fears are groundless. The boat is apparently a very sea-worthy one with a good practical man as captain, and while there may be a good deal of discomfort aboard of her, I imagine they will be so busy with their work that they won't have much time to think about roomy quarters.

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(c+a)

Crandall:---

At this end of the line things are drifting along quietly but nothing new is being considered, awaiting until the general situation here becomes more clearly defined and the policies and wishes of the new administration of the Department are made known.

Yours very truly,

*Frank A. Cameron*  
In Charge.



(c+s)

Grandall:---

At this end of the line things are drifting  
along quietly but nothing new is being considered, wait-  
ing until the general situation here becomes more clear-  
ly defined and the policies and wishes of the new adminis-  
tration of the Department are made known.

Yours very truly,

In Charge.

Page  
three



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

Monday, June 16, 1913.

Captain W. C. Crandall,  
Scripps Biological Station,  
La Jolla, California,

Dear Crandall:---

I am enclosing herewith the analytical results of the kelp that was towed through the water by the Agazi<sup>2</sup>, and am much surprised by them. In a general way there is some indication that, what we know to be a fact, the potash goes out of the kelp when left in the water, but these results also indicate very clearly that the leaching is by no means as rapid as we had formerly supposed. Lindemuth and Merz, who did the analytical work, will get out a paper promptly in the Journal of Industrial and Engineering Chemistry giving the analyses and a brief statement explaining them, and I have also used them in a discussion of the kelp situation which I have written for the Journal of the Franklin Institute, but if there is any way in which you can increase your score of publications or your fame by using them, they are yours for that purpose.

Matters are proceeding very slowly at this end of the line. Both Rigg and Frye report the kelp too young to date to make mapping entirely satisfactory in Alaska, and



Monday, June 16, 1913.

(c+s)

Captain W. C. Grandall,  
Scraps Biological Station,  
La Jolla, California.

Dear Grandall:---

I am enclosing herewith the analytical results of the kelp that was towed through the water by the Agassiz and am much surprised by them. In a general way there is some indication that, what we know to be a fact, the potash goes out of the kelp when left in the water, but these results also indicate very clearly that the leaching is by no means as rapid as we had formerly supposed. Lindemann and Mera, who did the analytical work, will get out a paper promptly in the Journal of Industrial and Engineering Chemistry giving the analyses and a brief statement explaining them, and I have also used them in a discussion of the kelp situation which I have written for the Journal of the Franklin Institute, but if there is any way in which you can increase your score of publications or your fame by using them, they are yours for that purpose. Matters are proceeding very slowly at this end of the line. Both Rice and Ryce report the kelp too young to date to make mapping entirely satisfactory in Alaska, and



(c+a)

Crandall:--

Frye has had further trouble owing to Wiley having been obliged to leave him for 6 weeks because of a previous contract with the Friday Harbor Outfit which latter would not release him. Frye reports that a large Alaria is common in the region which he has been visiting, but we have had no specimen of it yet for analysis.

Fisher, of the Pacific Products Company, of San Pedro, was here about a fortnight since with some very nice samples of various grades of potassium chloride which he claims they had prepared in their factory. He further claims that he has made satisfactory arrangements in Charleston to dispose of his products and was expecting to visit Niagra and other points in the north to make selling arrangements. He was very insistent that it was our duty to afford his particular company some sort of protection which would enable them to have exclusive control of the kelp beds, or at least part of the kelp beds near his out-fit, but of course this is impracticable. We sent him off feeling better I think when we figured out for him that with the greatest possible consumption he and the other three companies could hope to have in the next five or six years, that there was room for at least a half dozen more companies without seriously depleting the beds. My own feeling is that it would probably be very much wiser to have no state legislation regarding the cutting of these beds for some



Grandall:--

Trye has had further trouble owing to Wiley having been obliged to leave him for 6 weeks because of a previous contract with the Friday Harbor Outfit which latter would not release him. Trye reports that a large Albatross is common in the region which he has been visiting, but we have had no specimen of it yet for analysis.

Fisher, of the Pacific Products Company, of San Pedro, was here about a fortnight since with some very nice samples of various grades of potassium chloride which he claims they had prepared in their factory. He further claims that he has made satisfactory arrangements in Charleston to dispose of his products and was expecting to visit Misere and other points in the north to make selling arrangements. He was very insistent that it was our duty to afford his particular company some sort of protection which would enable them to have exclusive control of the kelp beds, or at least part of the kelp beds near his outfit, but of course this is impracticable. We sent him off feeling better I think when we figured out for him that with the greatest possible consumption he and the other three companies could hope to have in the next five or six years, that there was room for at least a half dozen more companies without seriously depleting the beds. My own feeling is that it would probably be very much wiser to have no state legislation regarding the cutting of these beds for some



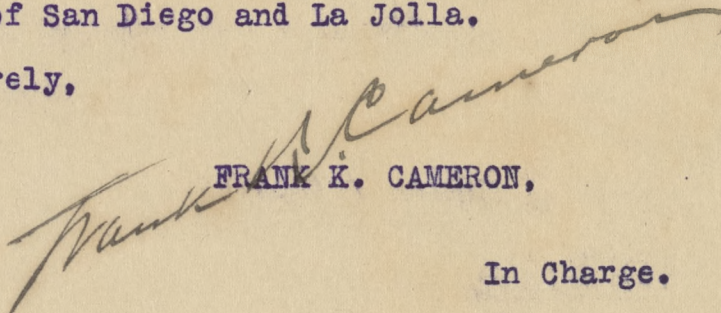
(c+a)

Grandall:---

years to come until the industry has been established and we really know definitely what protection is needed. However, neither I personally nor this office has the slightest disposition to offer gratuitous advice to the state authorities, although we hold ourselves entirely at their disposition at any time they may find it convenient and desirable to consult us.

It has turned desperately hot here and I long for the cooling breezes of San Diego and La Jolla.

Yours sincerely,



FRANK K. CAMERON,

In Charge.

Incl.



(c-2)

Crabapple:---

years to come until the industry has been established and  
we really know definitely what protection is needed. How-  
ever, neither I personally nor this office has the right-  
est disposition to offer protective advice to the state  
authorities, although we hold ourselves entirely at their  
disposition at any time they may desire to consult us.  
It has turned desperately hot here and I long for  
the cooling breezes of San Diego and La Jolla.

Yours sincerely,

FRANK K. CANNON

In Charge.

Inc.



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c-a)

Tuesday, July 22, 1913.

Captain W. C. Crandall,  
Scripps Institution for Biological Research,  
La Jolla, Cal.,

Dear Crandall:--

I am very glad indeed to get your letter of July 12. If you can conveniently do so, it would be well to take the samples from at least the principal stations, and I would rather like to have the leaching experiments tried over again if you can find it convenient to make them.

I am glad that Fisher and Cheney looked you up and am sorry you did not see them after they visited Balch and find out just what they did. When Fisher was here some weeks ago I rowed into him rather hard and told him that it would be distinctly to his interest to get in touch with Balch and try to make some arrangements with the old gentleman as Balch had not received any reward whatever for his truly valuable work, and at the same time was in a position with his patents to make trouble if he felt so disposed. I also gave Fisher to understand very positively that I would make these same statements to other people starting in the kelp busi-



1876

1990



(c-a)

Crandall:--

ness when the occasion arose. I was much more favorably impressed with Fisher here than I was when I met him out on the Coast, and I hope they are going to make the success which his report indicated were at hand.

I wrote to Wilson, of the American Potash Co., about a fortnight since. They are making quite a splurge in the technical magazines by a tremendously big advertisement. I asked him for the actual facts in the case, but have up to the present heard nothing from him. It might be worth while before very long for you to drop up to Los Angeles and run him down and find out what is actually going on, if anything.

I have been out of touch with Turrentine for two or three weeks. He is somewhere in southeastern Alaska chasing down canneries actual and hypothetical. Judging from his last letter the latter class is growing in numbers very rapidly. Turrentine is doing a splendid piece of work up to the present so far as I can judge. Just as soon as I can get in touch with him I will convey your messages, and I am sure he will be very glad to get them.

Page  
two

The weather has been abominably hot here, but fortunately we have had pretty cool nights and I cannot



Grandall:--

ness when the occasion arose. I was much more favorably  
impressed with Fisher here than I was when I met him  
out on the Coast, and I hope they are going to make the  
success which his report indicated were at hand.

I wrote to Wilson, of the American Trench Co.,  
about a fortnight since. They are waiting for a response  
in the technical magazine by a tremendously big adver-  
tisement. I asked him for the actual facts in the case,  
but have up to the present heard nothing from him. It  
might be worth while before very long for you to drop  
up to Los Angeles and run him down and find out what  
is actually going on, if anything.

I have been out of touch with Thornton for  
two or three weeks. He is somewhere in southeastern  
Alaska chasing down canneries actual and hypothetical.  
Judging from his last letter the latter class is growing  
in numbers very rapidly. Thornton is doing a splendid  
piece of work up to the present so far as I can judge.  
Just as soon as I can get in touch with him I will con-  
vey your messages, and I am sure he will be very glad to  
get them.

The weather has been absolutely hot here, but  
fortunately we have had pretty cool nights and I cannot

Have  
two



(c-a)

Crandall:---

say that I have really suffered much as yet.

Yours very truly,

FRANK K. CAMERON,

*Frank K. Cameron*  
In Charge.

Page  
three



(c-c)

Grandall:---

say that I have really suffered much as yet.

Yours very truly,

FRANK E. CAMERON

In Charge.

Base  
three



LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LA JOLLA, CALIFORNIA,

*Pt. Loma to Hueneme - Beds*

Aug 12th 1913

Dr. Frank K. Cameron,

Washington, D.C.

My dear Dr. Cameron:

I have just returned from a trip on the Agassiz and looked over a portion of the kelp beds that I surveyed two years ago. I observed the beds from Point Loma to Hueneme and found that they are practically the same as they were when we made the survey with the exception of the beds around San Pedro. These beds are now heavier than they were two years ago especially near the new breakwater. Here beds of considerable size are now developing that will act as a protection to the breakwater and are growths on the rock dumped into the sea during the building of the breakwater plus growth of old beds that were probably destroyed at that time. I stopped at the Fisher - Cheney plant but found everything closed down and no notice of office address or other means of locating the men. I will have to see Balch and see if he can give me their address and find out what they are doing. I dropped down to Longbeach and saw Wilson and Firman. When I arrived at their plant, I found that they had a party out showing them the kelp beds and that they are very active at present in selling their stock. They take out parties every Sat P.M. and then give a lecture on the charts etc. that we saw in their offices in L.A. They have sold \$30 000 of stock during the last few weeks and have placed about \$50 000 worth of bonds that they have issued. They have built a cottage office on their land and are building two sheet iron buildings for work. One of these is about 20x30 and is to be used as a machine shop. The other one is about the same size and is to be used as a Fish Scrap Reducer. They are now buying the fish scrap from the L.A. Tuna Packing Co and from the Southwest Packing Co. at the rate of 15 tons per day from each of the packing Cos. This work Wilson told me they would be doing.



This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf from an old book. The paper has a slightly textured appearance with some minor discoloration and faint smudges, characteristic of old paper. There is no text or other markings on the page.



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

#2.

two weeks and I figure that I will be able to get away about that time and look over the kelp situation and at the same time the fish scrap.

While in the North I learned that Bernstein had come in and started a company in L.A. for the handling of the Mexican Concession and that his company is incorporated under the laws of the State of Cal. I will also look up his company. You remember that the Pacific Kelp Mulch Co. thought that they had this kelp tied up. I will have also to see them and see how they are coming out. I got it indirectly that they were trying to form a union with Wilson. The whole situation needs going over as things seem to have changed since we were up there.

I also heard that Fisher and Cheney were going to make trouble for the other companies by tying them up on the processes but of course that was only hearsay and I could not get either of them.

There is another fish scrap factory started in San Pedro that is handling all of the scrap there at the present time and are following out the work that you and Turrentine suggested when you were there.

I carried out another leaching experiment this trip but had to do it under difficulties as we were under way so much that the kelp had to be out of the water for considerable periods. We can do this work better when we are on our shorter cruises and thus have the kelp in the water for more of the time. However I think that this is an immediate problem as the Wilson Co. still figures on using the net system for bringing the kelp to their factory.

You will find the brief of the ship's log pertaining to the Exp. attached

I trust that you were able to get away from Washington during the last hot spell and that life is again bearable.

Yours sincerely

W.C. Caudall



11

THE UNIVERSITY OF CALIFORNIA  
INSTITUTION FOR BIOLOGICAL RESEARCH  
STATION

PAID BY CASH

CHRONOLOGICAL INDEX



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

Aug 27th 1913.

Dr. Frank K. Cameron,  
Washington, D.C.

My dear Dr. Cameron:

I had a few days that I could use at my disposal and so went up to Los Angeles to look up the Kelp situation. I looked it up but the next time I am going to send up for a meteorological report before I go as it was so hot that I thought that I would cave in and have to let the work go for it was hotter than the hinges of hell around the various beaches. To add to my pleasure I found that nearly everyone was away or else was laying off on account of the heat. Still we managed to get ahold of some data and get a good line on some of the rest of it.

In the first place I went over the results of the experiments that I sent in to you for Apr. 16th and 18th. As I look over them I see that we got off on the wrong foot in some of our deductions when you were here and that you have repeated in your letter of June 16th. Namely that the kelp will begin to leach out as soon as it is cut. We forgot that we were not dealing with an ordinary land plant and that this is an ocean plant that is only fastened to the bottom by a holdfast and that the plant gets its nourishment from its leaves or fronds. These will be able to continue their ordinary anabolic and catabolic functions until such a time as the plant gets ruptured in some manner and decay begins to set in. This being true one would not expect that there would be a decrease in the chemical content of the plant until such a time had arrived. Now according to our observations

this does not happen until several days after the plant has been cut.

This decay will result from the diminished nourishment as well as from injury to the plant if the plant is kept within narrow quarters as in a net



1900

W. J. L. 1010

W. J. L. 1010

W. J. L. 1010



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

#2.

so that the food supply is cut off and the processes of metabolism are prevented. This would bring about the dissolution of the plant and it would lose its former chemical content. This would mean that within a reasonable time Wilson could handle his kelp in nets without loss but for the practical difficulties that I see would stand in the way. I have not taken this matter up with anyone else but let you have my belated opinion first. This will give you something for a summer's evening to think about and from the data that you sent me, it seems to me that this solution will answer the data better. The results also show that we will need to take some samples that take the leaves and fronds separately so as to get the value of the various parts of the plant.

Now as to the work that I did on my trip: I went up last Saturday night on the Owl to Los Angeles and Sunday I spent looking over telephone directories, city directory etc and getting the lay of the land again. I found that the Pacific Kelp Mulch Co. had given up their city office and moved to Terminal Island. That was about the result of Sunday's work.

Monday I went down to San Pedro early in the morning and went over to Terminal Island to see the Pacific Kelp plant. Nobody was there and there was no evidence of much recent work being done. They had about half a barge load gathered in sack ready for shipment and the rest of the barge load decaying out in the bay. Evidently things were very slack. Then I went over to San Pedro and went over the Fish Market as I had heard that someone was buying up all of the fish scrap. None of the ordinary fish handlers were selling any scrap but I found that the Pearsons Tunny Co., <sup>San Pedro</sup> Longbeach; White Star Canning Co., San Pedro; So. Coast Canning Co., Longbeach; L.A. Canning Co., Longbeach and a company in Wilmington that handle Tunny were selling their output to the San Pedro Fertilizer Co. whose offices are in the Chamber of Commerce office Bldg.



THE ROBERTS INSTITUTE FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

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THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

#3

LA JOLLA, CALIFORNIA,

San Pedro. They have a reducing plant between San Pedro and Longbeach but it was rather inaccessible so I did not see it. They have only been in business a very short time and as I could not get the manager I did not get more dope on it. I thought that Dr. Turrentine might like the latest for his work when he gets back. By the way the output is sold to the Standard Fertilizer Co. of Los Angeles.

Then I went all over the town of San Pedro and tried to get a line on Cheney, and Fisher. They are still away and I cant locate their addresses when they are in Los Angeles. They were supposed to live at the Pickwick Apartments but on inquiry there I was unable to locate them. Fisher is supposedly in San Francisco while Cheney is in New York. Their plant is still closed down. I then went over to Longbeach to the American Potash plant. Wilson was in San Francisco or at Half Moon Bay and Firman said that he was going to bring down the last of the Half Moon plant. This is to be put in a new building 30x80 and used for the benefit of Government Experts, Missourians and other doubting Thomases. They are also erecting another building that is to be used for fish scrap which they claim they have a contract for from the two Longbeach Tunny firms. These firms are now selling to the San Pedro Fertilizer Co. Firman said that Guthrie of the Pacific Kelp Mulch Co. had been trying to get them to form an amalgamation with them which leads me to suspect that the officers other than the Shiner Bros. are beginning to take a hand in the active work of the P.K.M.Co. Of course I am not sure that Firman was giving me all the news but from appearances I suspected that he was. The A.P.CO. now have the little office building and the three sheet iron buildings under construction. They now say that it will be a month at least before they will be in active operation. When I stopped in there a couple of weeks ago they said two weeks and now it is a month longer. The A.P.Co. are at least putting up some buildings the cheap ones that they could use for work.

Then I went back to San Pedro to transfer more facts than but I could not



THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

CHICAGO, ILL.

TO THE HONORABLE SENATE OF THE UNIVERSITY OF CHICAGO

On October 10, 1900



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

#4.

Then I went up to Los Angeles and sweltered for the night.

Tuesday morning I went out to try and track down the Cheney, Fisher crowd but was unsuccessful so I again went to San Pedro to see Shiner for whom I had left a note but he wasn't there. However I found some of his men who said that they weren't doing much. They had not cut much kelp recently and there were no orders to be filled on hand. As it was then well on in the afternoon, I laid off and cooled off a bit as I was about in.

Wednesday I put in tracking down the Mexican Kelp Fertilizer Co. which was incorporated in Mar. under the Laws of Cal. and whose papers are on file in the office of the L.A. Co. Recorder. index #15734. The incorporators are Joseph Manasse, Los Angeles, and who is now on the concession in Mexico. R. Tellner " " who was going to put up some money but times curtailed him. He is the manager of a piano house at 401 S Hill St. J. I. Caballero Cananea, Mexico. John C. Donlevy Cananea Mex., G. M. Bernstein " " and who is the promoter of the deal and has the concession. He was in Los Angeles lately but is now in Mexico. Herbert S. Bailey Los Angeles, Couldnt locate. W. A. Kulp " " " " .

Capital Stock \$200,000 in \$1 shares.

Attorney Lawyer Huntsberger, Ferguson Bldg, 3rd and Hill Los Angeles. He was the only one that knew anything about the deal and he said that they were going to sell all of their kelp to the P.K.M.CO. As I have said before the P.K.M.Co. seem to be rather quiet and I dont know about this part of the deal. There was some hitch about the concession because of the overlapping of this concession with the Sandoval Fishing Concession but Huntsberger claimed that this had been straightened out satisfactorily for their firm. I am in hopes that I will get more complete returns from Bernstein when he



THE SCIENTIFIC LIST OF THE BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LA JOLLA, CALIFORNIA

1901

1901-1902



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

#5

returns from Mexico. They have taken one of the Kelp cutters down near Ensenada and are to work near there. So far they have done nothing and have had some trouble with Mexican duties. This finished up all that I could do on this trip so I caught the Owl down to San Diego. When I got home I found Mr Stewart here from Berkeley and he is sent down by Bird to get samples for the State Horticultural Dept. and from my talk with him I see that the State is now going to start a line of experiments on the kelp. This will be in line with what you wanted, I believe. I conferred with him to some extent, and I believe that Stewart is a good man. He seems to be alive and a worker.

I did not go to Azusa or Covina to see the ranches that used the kelp last fall. If you want them visited, I will go up in a few weeks (after it gets cooler) and see what effect the kelp had on the citrus trees. Shall I go up in five or six weeks and see what Wilson is doing with his plant?

We are carrying on a lot of experiments here at the Station on the growth of the kelp and kindred work.

Yours truly

W. C. C. Audace



THE SCIENCE OF MEDICINE FOR MEDICAL STUDENTS  
IN THE  
UNIVERSITY OF CALIFORNIA

OF THE UNIVERSITY OF CALIFORNIA

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UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

August 27, 1913.

Mr. W. C. Crandall,

The Scripps Institution for Biological Research,  
University of California,  
La Jolla, California.

Dear Crandall:-

Your interesting letter of the 12th read several times. I am sorry the kelp industry is not developing more rapidly and avoiding stock jobbing features. It is a good thing and should be pushed. But the antics of the present crowd in it may give it a bad name. If the Berkeley people would only get into the game, it would be a good thing for Berkeley and they could hold the Los Angeles operators in line.

We are hard pressed just now with several of our people off on vacation, but we will get all the samples analyzed in due time. I think it wise to repeat the leaching experiment again.

Rigg is back from Alaska. Seems to have done a lot of work but had trouble with a drinking captain and had to quit three weeks earlier than planned. Frye also had trouble with his Captain, but chucked him and his boat, hired another and went ahead. I expect him back in Seattle within the next fortnight. They found Nereocystis and even considerable Macro-cystis. But apparently the principal kelp is Alaria.



August 27, 1913.

Mr. W. C. Cramball,

The Scripps Institution for Biological Research,

University of California,

La Jolla, California.

Dear Cramball:

Your interesting letter of the 13th read sev-

eral times. I am sorry the kelp industry is not developing

more rapidly and avoiding stock holding features. It is a

good thing and should be pushed. But the critics of the pres-

ent crowd in it may give it a bad name. If the Berkeley people

would only get into the game, it would be a good thing for Berke-

ley and they could hold the Los Angeles operators in line.

We are hard pressed just now with several of our

people off on vacation, but we will get all the samples ana-

lyzed in due time. I think it wise to repeat the kelping ex-

periment again.

Rigg is back from Alaska. Seems to have done

a lot of work but had trouble with a drinking captain and had

to quit three weeks earlier than planned. Rye also had trouble

with his Captain, but checked him and his boat, fixed another

and went ahead. I expect him back in Seattle within the next

fortnight. They found Mercosystis and even considerable Macro-

cystis, but apparently the principal kelp is Alaria.



Mr. W. C. Crandall - 2.

Things are drifting here, and I cannot foresee how they are to develop. Turp is to be in Los Angeles before long and it would be well for you to meet him there if you can conveniently. You can get him by a line to J. W. Turrentine, care of E. E. Free, Monadnock Building, San Francisco. With best regards,

Sincerely,

*Frank A. Cameron*

In Charge.



Mr. W. C. Standall - S.

Things are drifting here, and I cannot remember how  
they are to develop. There is to be in Los Angeles before long  
and it would be well for you to meet him there if you can con-  
veniently. You can get him by a train to J. W. Thurston.  
care of E. R. Free, Monahan's Building, San Francisco. With  
best regards,

Sincerely,

In Charge.



Brief of Kelp Work for Aug. Trip 1913 of the Agassiz.

Sample taken from off Point Vincente in the vicinity of the beds that are now being cut by the Pacific Kelp Mulch Co. Lat. 33° 22' 30" Long 118° 20'

Date	Time	No.	Remarks	Time in water.
Aug 9	5 PM	1	Out of water 22-350	1 1/2 hrs.
" 9	6 PM	2	"	1 1/2 hrs.
" 9	8 PM	3	"	2 1/2 hrs.
" 9	10 PM	4	"	1 1/2 hrs.
" 10	5 AM	5	"	6 hr 45 min
" 10	10 AM	6	Steaming to station Vincente	2 hrs.
" 10	4 PM	7	" " Aralon	2 hrs.
" 10	8 PM	8	"	4 hrs.
" 18	12 PM	9	Steaming to San Diego	2 hrs.
" 11	4 PM	10	San Bay	1 1/2 hrs.
" 12	7 AM	11	"	3 hrs.
" 12	10 AM	12	"	3 hrs.
" 12	4 PM	13	"	3 hrs.
" 12	7 PM	14	"	3 hrs.
" 13	7 AM	15	"	3 hrs.
" 13	7 AM	16	"	2 1/2 hrs.
" 16	7 AM	17	"	2 1/2 hrs.
" 17	7 AM	18	"	2 1/2 hrs.
" 17	7 AM	19	"	2 1/2 hrs.
" 17	7 AM	20	"	2 1/2 hrs.
" 9	2 PM	22	In sack - dried fresh sample	

Respectfully submitted,

Samples are being shipped by express.

W.C. Crandall



LEY CONGRESS LIBRARY 1890-1891

LEY CONGRESS LIBRARY 1890-1891



# Pacific Products Company

(Incorporated)

~~111-11-12-13 California Building~~

~~Second and Broadway~~

Box 185 San Pedro, Cal.

Los Angeles, Cal.. Sept 1, 1913.

Mr. W. C. Crandall,  
San Diego, Cal.

My dear Sir:—The writer learned last Thursday at San Pedro you were inquiring for me. We have been doing some moving the last few months and it has been rather difficult to find us.

Mr. Cheney is now East looking after some improved machinery we are going to install and I thought better to write you and place myself at your disposal if any service can be rendered. I regret it very much having missed you; but it is too late now.

Will you indicate the nature of the business and if necessary will come to see you. Will say that we have concluded satisfactory arrangements with Mr. Balch for the use of his patents and his services.

Awaiting your desire and again expressing my regrets for not seeing you, I remain,

Very respy Yours,

Pacific Products Co.,

per. *W. Frank Fisher* Secy.



# THE HARTLEY MANUFACTURING COMPANY

INCORPORATED IN THE STATE OF NEW YORK  
OFFICE OF THE SECRETARY OF STATE  
ALBANY, N. Y.  
JANUARY 1, 1892

NEW YORK, N. Y.



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

Sept. 5th 1913

Dr. Frank K. Cameron,  
Washington, D.C.

My dear Dr. Cameron:

I had a long talk with Brander Tuesday in San Diego and found that he expects to go up to Los Angeles and live next week. He will live at the Westonia Cor 5th and Flower. As he is doing very little here, he thinks that he will go up there and watch the development of the American Potash Co. Inc. He is very optimistic about the future of their corporation and believes that they are now about to get at a good business basis. Wilson has come around through the efforts of Brander and Knapp to the belief that you were right in your ideas on the best way to start out in the kelp industry. They are putting up the 40 x 120 building to cure the kelp in and adding the dried kelp to the fish scrap they will put this article on the market and then later go in for Wilson's dream of a complicated chemical factory. Brander assured me that he did not know of any combinations or amalgamations that were being considered in any way by his firm and he could not now see how it would be to their advantage to unite with any of the other firms. He promised to keep me posted in regards to their own movements and let me know when they did anything worthy of note. Brander is the frankest of the lot and I feel that he thinks that it is to his interest to give the information we want to us as it will come out to their advantage to do so.

I will have another leaching experiment under way for you next week and the week following. Bird's man Stewart telephoned me yesterday and he is getting a lot of samples and going after the work seemingly in good shape and earnest. I am to see him and have a talk with him next week.

Do not want to go up and help them out when he comes as I just got







#2.

stranger. By the way I got track of a new Tuna -acking Co. in San Diego the other day and as soon as I can get time I will go down and see the plant and write Turp about it. They wanted some information and sent me an urgent invitation to call on them and see their plant. How should Turp be addressed now when you want to send him an official communication? I suppose that he has plenty of time now to properly compile his diary and expound it to the fair maidens of Washington and Baltimore. It ought to give him quite a sendoff. If he needs any special data to complete it, I will be glad to get it for him.

I still am getting the specimens for you. It isn't as easy a job as I figured on as the blooming things break off near the bottom all of the time but you will get them finally.

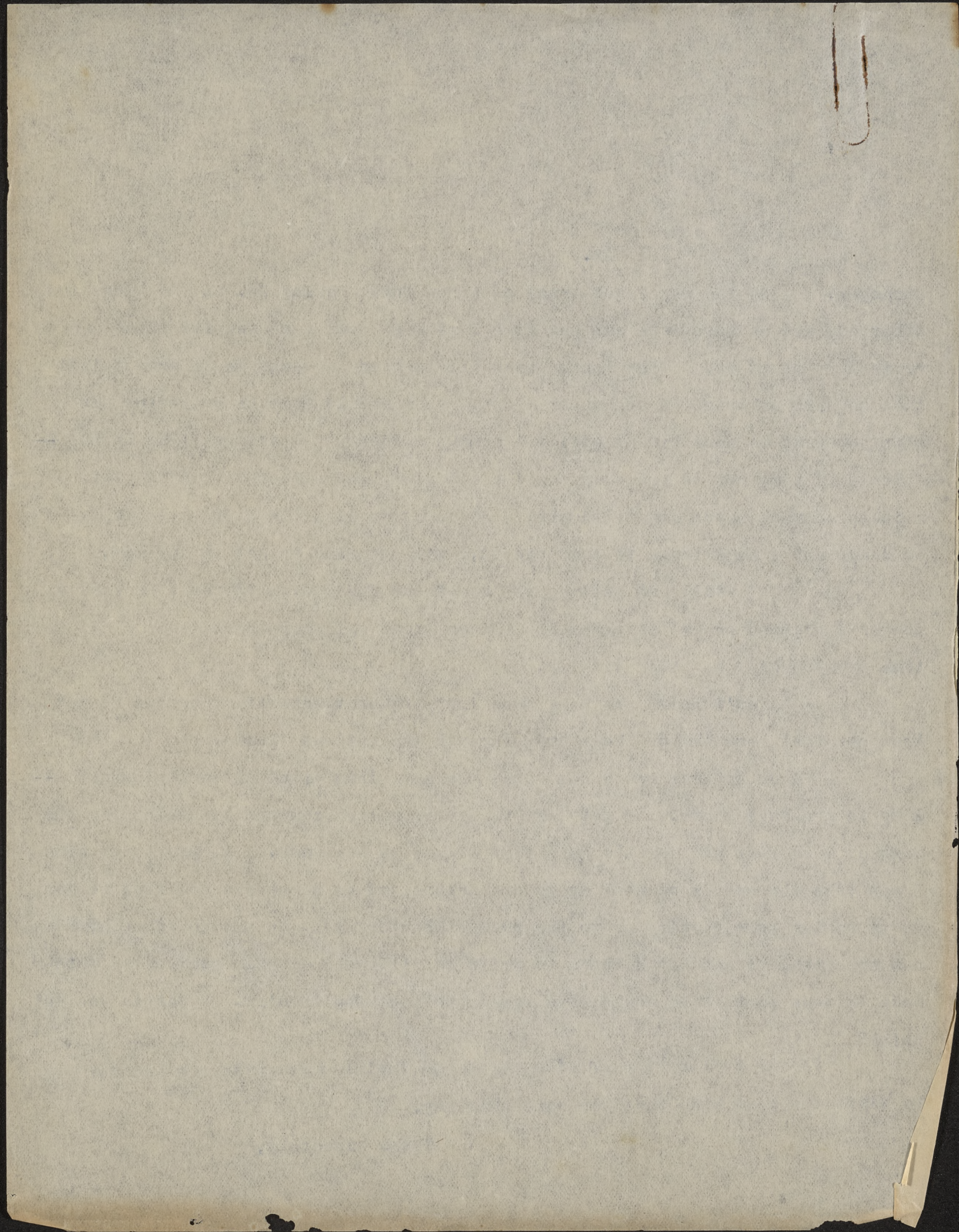
I haven't heard anything more from the Univ. Investigation and do not know how they come out on their trip through the various plants.

I do not see how we can force the nays into quiet although I should like to see them there. I get letters and inquiries constantly asking for the work of last year and for the nays that I made of the work. If you think wise I can take the matter up with my friend Kettner of the House and see what he can do by making some inquiry as to the reason the work that he has heard about has not appeared. I can get a bunch to write to Billy and get him stirred up with some letters so that he would have reason to make the inquiry. What do you think?

Work is moving here in nice shape and I will have quite a place for you to visit the next time that you come this way.

Yours sincerely,







FLP

ADDRESS ALL COMMUNICATIONS TO  
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

Sept. 5, 1913.

Mr. W. C. Crandall,

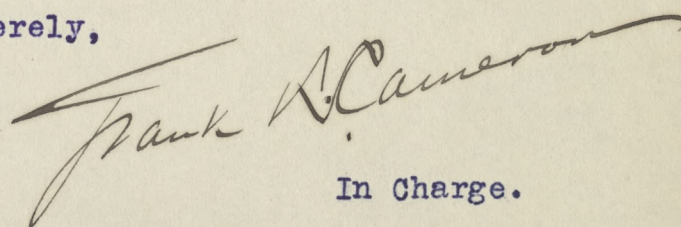
The Scripps Institution  
for Biological Research,

La Jolla, Calif.

Dear Crandall:

Your very interesting letter reporting progress and dated August 27th. is just at hand. It is too bad that things have not gone better at Point Firmin. I hope they will look more promising when you next go to Los Angeles. I expect Turrentine will be there in a few days and you ought to join him if you can conveniently. I am going out of town Sunday for about a week, and contemplate a few weeks' vacation shortly afterwards but will keep in touch with the office. Frye will come on from Seattle about the end of the month, and with personal interviews with him and Turrentine, I hope to develop the situation into some definite form and will then write you. At present the kelp situation is far from satisfactory from every point of view.

Sincerely,

A handwritten signature in dark ink, appearing to read "Frank A. Cameron". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

In Charge.



Sept. 5, 1918.

Mr. W. C. Crambell,

The Scripps Institution  
for Biological Research,

La Jolla, Calif.

Dear Crambell:

I am very interested in the progress and dated August 27th. is just at hand. It is too bad that things have not gone better at Point Pinos. I hope they will look more promising when you next go to Los Angeles. I expect Turner-  
time will be there in a few days and you ought to join him if you can conveniently. I am going out of town Sunday for about a week, and contemplate a few weeks' vacation shortly afterwards but will keep in touch with the office. Mye will come on from Seattle about the end of the month, and with personal interviews with him and Turner, I hope to develop the situation into some definite form and will then write you. At present the help situa-  
tion is far from satisfactory from every point of

view.

Sincerely,

In Charge.



Sept. 20th 1913.

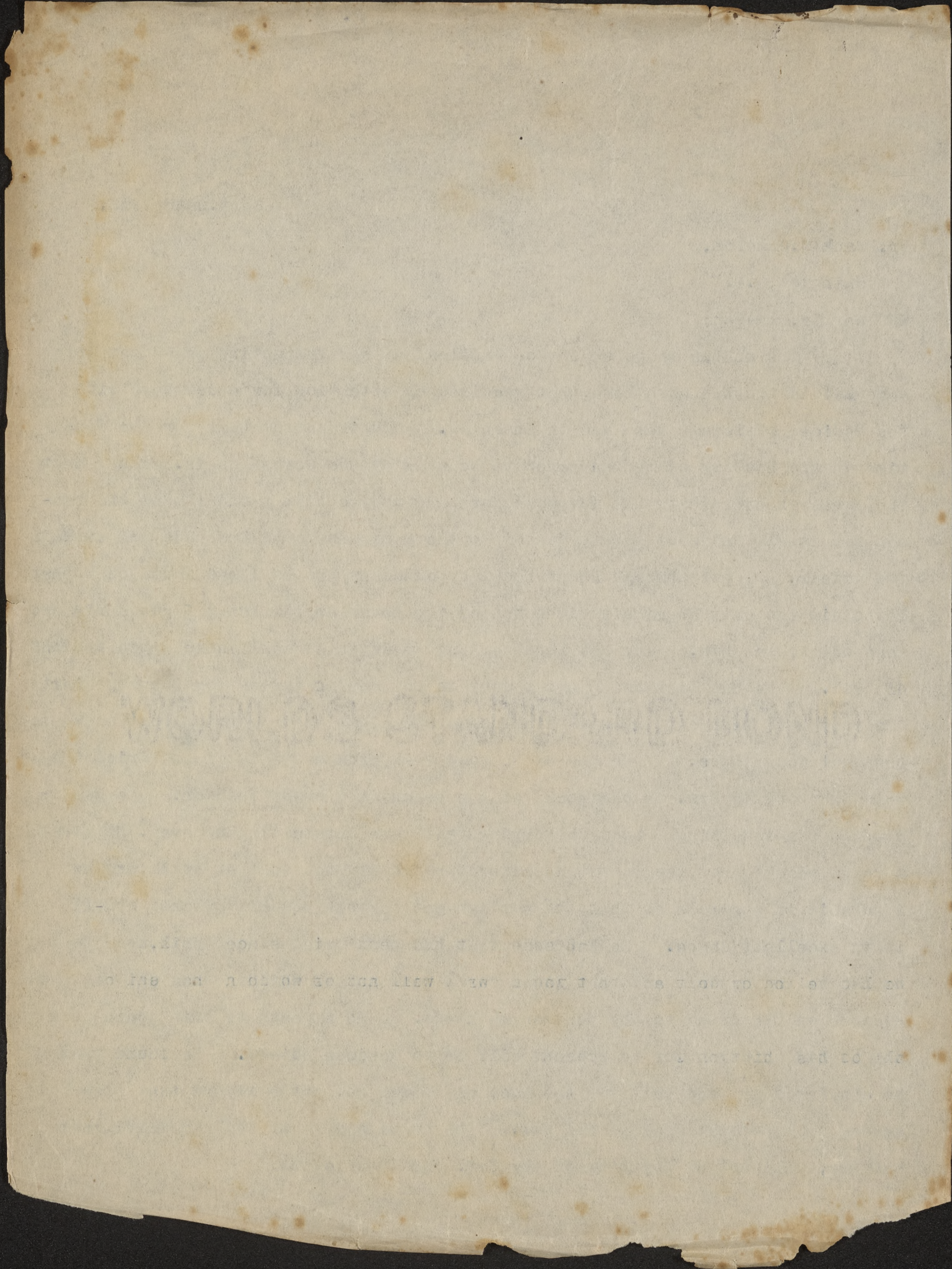
Dr. Frank K. Cameron,

Washington, D.C.

My dear Dr. Cameron:

I was unable to go up to Los Angeles and see Turrentine as we got into some little trouble down here that required my attention for a few days with the Mexican officials here and in Ensenada. Their patrol boat for the first time in the history of man happened to be over at the Coronados Is. when I sent the Agaassiz over last week for some work and they couldn't understand the reason for it all and so I had to jump into the game and go to Ensenada and explain the affair. I got through about noon on Wednesday and as I had found out that Bernstein was only about six miles out on the beach drying kelp I got a rig and went out to see him. He had been working there on a small scale since the 1st of April. He has been using about four to ten men in dories for the most part and they have been cutting with sickles as they lost their cutting boat soon after they got down there. He has cut a good deal from a small bed and dried the kelp in about 48 hrs. on the rocks of the beach in a crude fashion. He has found out a few things about the drying that were interesting however. He first spreads his kelp on the rocks and after turning it once so that it is dry he stacks it in a circle so that the air can get through and his stacked stuff is in excellent shape. He had some that had been dried since April, some that he had bailed crudely and that would carry well and of which he has shipped about 20 tons of the dried to the Mexican mainland. He expects to ship again soon all of his shipping for the present will be to Mexican points. He found that he could not dry and bail for the Pac. Kelp Mulch Co. at the figure that they had agreed upon so that deal is all off. The holding company, Mexican Fertilizer Kelp Co., will not do anything in the U.S. for the present.







UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

Sept. 16, 1913.

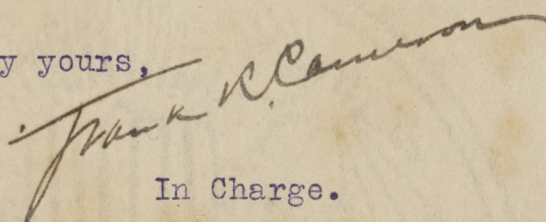
Mr. W. C. Crandall,  
The Scripps Institution for Biological Research,  
University of California,  
La Jolla, California.

Dear Crandall:

I am sorry to say that I have just received your letter of September 5, owing to the fact that I have been out of town for some days.

I imagine that at this writing Turrentine is already in Los Angeles and I hope that you are with him. I am much interested in what you tell me about Brander, in whom I have a good deal of confidence and I am hoping that things will go forward a little better now. I am inclined to think it might be good for you to suggest to Brander that he get in touch with Ennis, whom you will remember called on us last spring. He seems to me to be a first-class man and of a type that Brander could get along with nicely and from whom he could get help. I am also glad to hear that Bird is apparently taking the kelp matter up in a serious and satisfactory way.

Very truly yours,



In Charge.

FKC/D





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THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
CHICAGO, ILLINOIS

TO THE HONORABLE CHAIRMAN OF THE BOARD OF TRUSTEES  
OF THE UNIVERSITY OF CHICAGO

AND TO THE HONORABLE CHAIRMAN OF THE BOARD OF TRUSTEES  
OF THE UNIVERSITY OF CHICAGO

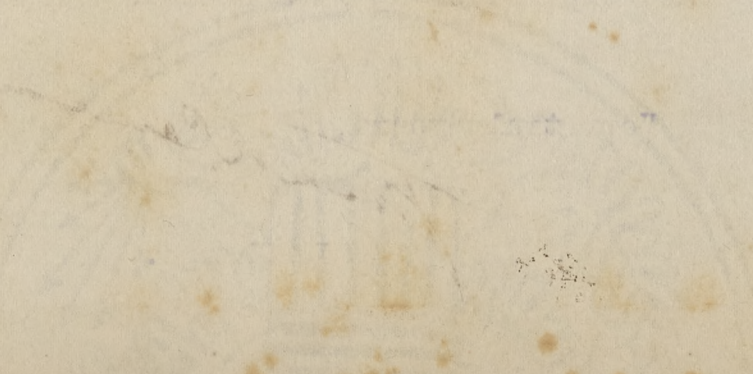
I have the honor to acknowledge the receipt of your letter  
of the 10th inst. regarding the proposed

amendment to the constitution of the University of Chicago  
and to inform you that the same has been referred to the

Board of Trustees for their consideration. I am sorry that  
it will be some time before a decision can be reached.

I am, however, sure that the Board will act wisely and  
in the best interests of the University.

I am, Sir, very respectfully,  
Your obedient servant,  
J. H. DILLON





UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

FKC/D

Sept. 29, 1913.

Mr. W. C. Crandall,  
The Scripps Institution,  
La Jolla, California.

Dear Crandall:

Yours of the 20th just at hand. I was away from my office Saturday, hence the delay in attending to your letter.

Dr. Turrentine came in this morning and reports that the Pacific Kelp Mulch Co. has apparently disappeared from the horizon at Los Angeles, as he could not get track of them. He also thought that the American Potash Co. were carrying on affairs in a manner which might subject them to being criticized as "wind-cat." From some of the men behind the scenes he got the impression that the reliable members of that concern were very much disturbed and there was likely to be a change at almost any time.

I am greatly interested in what you say about Bernstein's efforts. We wrote to the Pacific <sup>Kelp</sup> Mulch Co. some time ago, asking them to quote us a price on two or three hundred pounds of dried kelp, to be shipped in, as we wanted to try some laboratory experiments here on larger amounts. We have not heard from them, and am wondering if you could manage to get us about that quantity, dried and sacked and



Sept. 29, 1913.

Mr. W. C. Grandall,  
The Scripps Institution,  
La Jolla, California.

Dear Grandall:

Yours of the 20th just at hand. I was away from  
my office Saturday, hence the delay in attending to your  
letter.

Dr. Turner came in this morning and reports  
that the Pacific Kelp Mole Co. has apparently disappeared  
from the horizon at Los Angeles, as he could not get track  
of them. He also thought that the American Potash Co. were  
carrying on affairs in a manner which might subject them to  
being criticized as "wild-cat." From some of the men behind  
the scenes he got the impression that the reliable members of  
that concern were very much disturbed and there was likely to  
be a change at almost any time.

I am greatly interested in what you say about Har-  
stein's efforts. We wrote to the Pacific Kelp Mole Co. some  
time ago, asking them to quote us a price on two or three  
hundred pounds of dried kelp, to be shipped in, as we wanted  
to try some laboratory experiments here on larger amounts.  
We have not heard from them, and are wondering if you could  
manage to get us about that quantity, dried and packed.



W. C. Crandall-----2

shipped in. If so, proceed at once to get the material and let me know so that I can send you the proper papers for shipping by freight.

I am sorry to have to report that the prospects are very dubious for the publication of the maps of the kelp groups surveyed by you. There has been a rather thorough upset and overhauling in the matter of publications in the Department, and I have been pretty definitely informed by the Chief of the Bureau that there is no prospect of the Department publishing the maps. I am taking steps to see if we can arrange to have them published by some outside organization and as soon as I have anything definite to report, will advise you. Naturally, I protested pretty vigorously against this state of affairs, but in vain, and do not see how I can with propriety go any further in the matter inside the Department. If you have any suggestions regarding this matter, I shall be glad to have them.

Sincerely yours,

FRANK K. CAMERON,

*Frank K. Cameron*  
In Charge.



shipped in. If so, proceed at once to get the material and  
let me know so that I can send you the proper papers for  
shipping by freight.

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very dubious for the publication of the maps of the help groups  
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to have them published by some outside organization and as  
soon as I have anything definite to report, will advise you.  
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of affairs, but in vain, and do not see how I can with pro-  
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you have any suggestions regarding this matter, I shall be  
glad to have them.

Sincerely yours,

FRANK K. CAMERON

In Charge.



Marshfield

Oct 2 1913

Coos Co

Ore

MY dear Crandall

I forward you a few notes on the growth of the Nereocystis made this year.

The method I used Was to cut a few marks ~~an~~ the rock vlose to the attachment of the plant, I marked ten ,I made the marks on the fourth of March which was the first time I noticed the beginning of growth when the plants were in the wharty form, the observatinns were made on the rocks below the lighthouse at Cape Arago, On Mar21 they had a solitary leaf about four inches long ,on April 12 some of the fronds had began to split, onthe 22 they were all split and about 10 in long, but with no sign of the pneumocyst, on~~April~~ May 12 the pneumocysts were about the size of a large pea and the total length of the plants were about 42 in long, the stems being 19, I did not go down to the place until the 18 of June when the plants were 14 ft 5 in long on July 26 they were 25 ft on Aug 24 they were ~~31~~ 31 ft ON Sept 29 they were beginning to be torn away from their attachments six only being attached to the rocks. I took anaverage of the ten plants by adding totals together and dividing by ten. Dont forget to send me a copy of your last years work. Any further work I can Do for you I shall be glad to do if you let me know what is wanted.

With best wishes I remain

yours sincerely

Walton Hayden M.D.



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FKC/D

October 24, 1913.

Walton Haydon, M. D.,  
Marshfield, Oregon.

Dear Doctor Haydon:

Mr. Crandall of La Jolla has just sent me a copy of your letter to him of October 2, with the interesting details regarding the growth of young giant kelps.

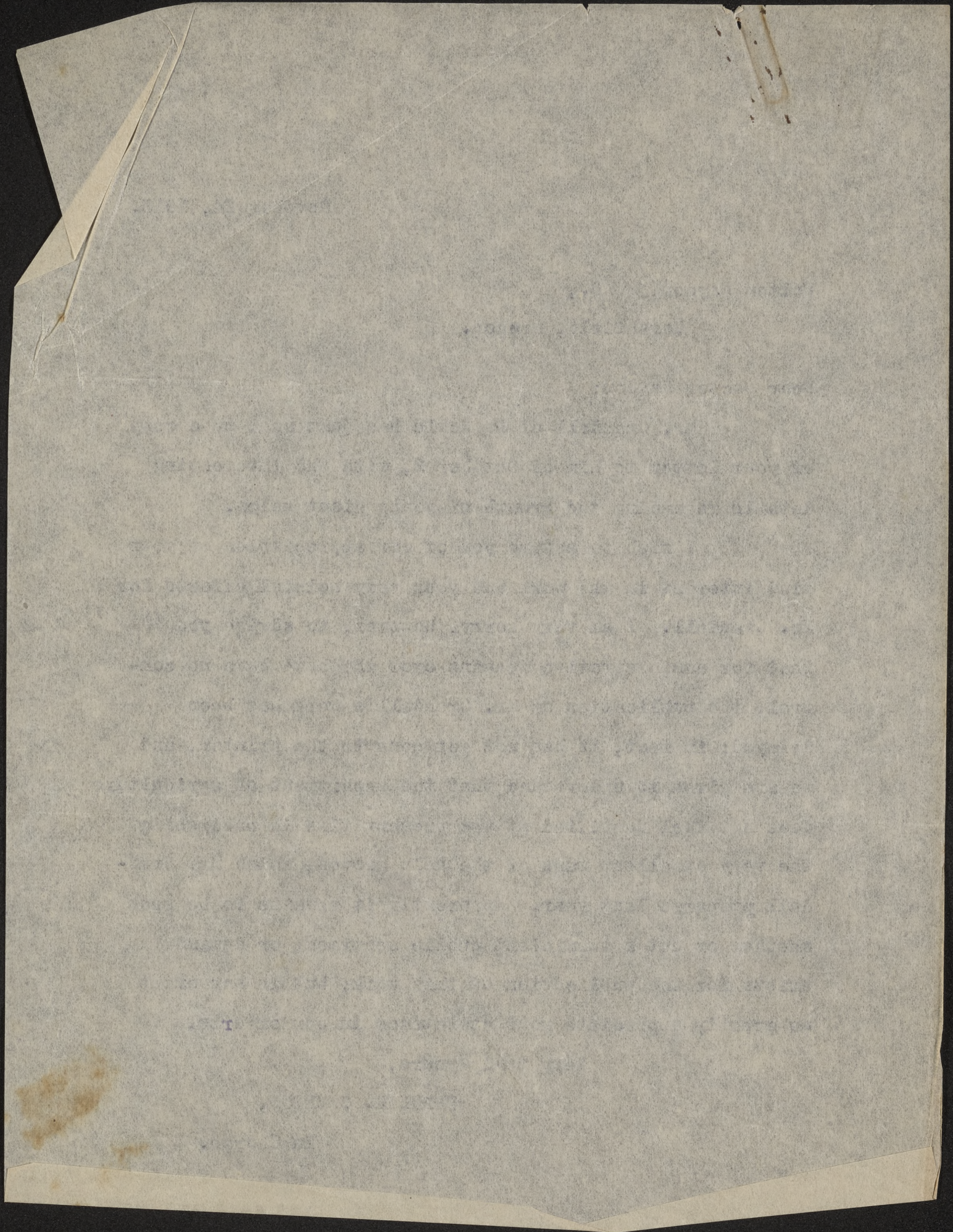
I wish to assure you of our appreciation of your kind interest in the work and your very helpful efforts for Mr. Crandall. I am very sorry, however, to advise you that for administrative reasons over which we have no control, the publication of Mr. Crandall's work has been delayed; in fact, it has not yet gone to the printer, and we are given to understand that the Department of Agriculture does not feel justified at the present time in publishing the very excellent maps of the kelp groves, which Mr. Crandall prepared last year. Apparently it remains to be seen whether or not a sufficient public sentiment or demand exists for the publication of this work; but in any event we greatly appreciate your assistance in our efforts.

Very truly yours,

FRANK K. CAMERON,

In Charge.







J. W. CHENEY, PRES.  
LOS ANGELES, CAL.

CHAS. METZ, VICE PRES.  
LOS ANGELES, CAL.

W. FRANK FISHER, SECY.-TREAS.  
LOS ANGELES, CAL.  
SUNSET VERMONT 2645

PAUL S. SHOAF  
CHEMICAL ENGINEER

DAVID M. BALCH, B. S. OF HARV.  
CONSULTING CHEMIST

WM. L. KUEHN, ATTY.

# Pacific Products Company

(INCORPORATED)

MANUFACTURERS OF

POTASH-IODINE AND BY-PRODUCTS

MAIN PLANT  
AND  
LABORATORY,  
WHITE'S POINT, CAL.

OFFICE  
STATE BANK BUILDING  
SAN PEDRO, CAL.

PHONE MAIN 84

SAN PEDRO, CAL., Oct. 7, 1913.

.....  
.....  
Dear .....:

We enclose herewith a letter we want you to write to five of your friends or acquaintances and enclose one of the confidential letters. Select those whom you feel will invest a few hundred or more. This will greatly assist us in placing this issue of stock and get the money necessary to install our new machinery. This will cost you only a few cents in stamps and a little effort, which will come back to you many times over, as soon as we operate. This letter going to your friend direct from you, will appeal to him very strongly. We want this money raised as soon as possible, so that we can go ahead and rush our plant to completion. It is poor business policy to try and do business on promises, we must have money and when we get \$15,000, we will soon put in operation a plant that will be a money maker.

Your officers are meeting with good success and your efforts will help raise the amount that much quicker and also give your friends an opportunity they otherwise might not get. Boost and work. Every dollar we raise now saves 25% to 50% commission. Any assistance desired will be gladly furnished by the secretary upon application.

Yours for Success,

W. FRANK FISHER, Secretary.

By Order of Board of Directors



30000  
 25-  
30000

30000  
 1-

10,00  
 20  
 15,000  
100,000  
 30,000

6000

5000

7000  
 1200  
3200  
 26,500  
 2000  
15,000  
 26,500  
 17,500  
4,000

57,000  
49,000

18  
31  
 49

570%  
 20%  
290%  
 71%



Oct. 12th 1913.

Dr. Frank K. Cameron,  
Washington, D.C.

My dear Dr. Cameron:

I had sent to you another set of leaching experiment last week. This work was done for me on the boat as I was too busy to go on the last trip.

Coronado. So. Is.

Point Loma

Mexican #4.

Station #1.

1 9.30 a.m.	1 9/27/13	11 a.m.
2 2 p.m.	2	2 p.m.
3 3		
4 4		
5 5	5	5
6 6	6	6
7 7	7	7
8 8	8	8
9 9	9	9
10 10	10	10
11 11	11	11
12 7 a.m.	12 9/28/13.	7 a.m.
13 8	13	8
14 9	14	9
15 10	15	10
16 11	16	11
17 2 p.m.	17	2 p.m.
18 5.	18	5
19 8	19	8
20 11	20	11
21 5 a.m.	21 9/29/13	5 a.m.
22 8	22	8
23 11	23	11
24 2 p.m.	24	2 p.m.
25 5	25	5
26 8	26	8
27 5 a.m.	27 9/30/13	5 a.m.
28 11	28	11
29 5 p.m.	29	5 p.m.
30 11	30	11
31 5 a.m.	31 10/1/13	5 a.m.
32 11	32	11
33 11 a.m. 11 a.m.	33 10/2/13	11 a.m.
34 11 a.m.	34 10/3/13	11 a.m.
35 9.30 a.m.	35 9/27/13	11 a.m.

Dried samples.



1870-1871



Dr. F. K. C. 42

I have had to get my caretaker to do the work for this leaching work and it would be only right to give him something for his work. I should say that he ought to have \$20.00 or \$25.00 for the trouble that he has been to during the last few months as I have relied on him for a good part of the drudery that I was not in a position to handle. The name of the caretaker is James Ross, P.O. #997, San Diego, Cal.

Below is a copy of a letter that I received from Dr. Haydon of Marshfield.  
Oct. 2 1913. Marshfield, Coos Co. Ore.

My dear Crandall

I forward you a few notes on the growth of the Nereocystis made this year.

The method I used was to cut a few marks on the rock close to the attachment of the plant. I marked ten. I made the marks on the fourth of March which was the 1st time I noticed the beginning of the growth when the plants were in the wharty form. The observations were made on the rocks below the lighthouse at Gate Arago. on Mar. 21 they had a solitary leaf about 4 in. long, on Apr. 12 some of the fronds had begun to split, on the 22nd they were all split and about 10" long, but with no sign of the pneumocyst, on May 12 the pneumocysts were about the size of a pea and the total length of the plants were about 42" long the stems being 19". I did not go down to the place until the 18 of June when the plants were 148 14' 5" long; on July 26th they were 25'; on Aug. 24th they were 31'; on Sept. 29 they were beginning to be torn from their attachments six of them only being attached to the rocks. I took an average of the ten plants by adding totals together and dividing by ten. Don't forget to send me a copy of your last years work. Any further work I can do for you, I shall be glad to do if you let me know what is wanted.

With best wishes I remain

Yours sincerely

Walton Haydon M.D.

I wish that you might find time to write to Dr. Haydon and thank him for the interest that he is showing and the results that he is getting.

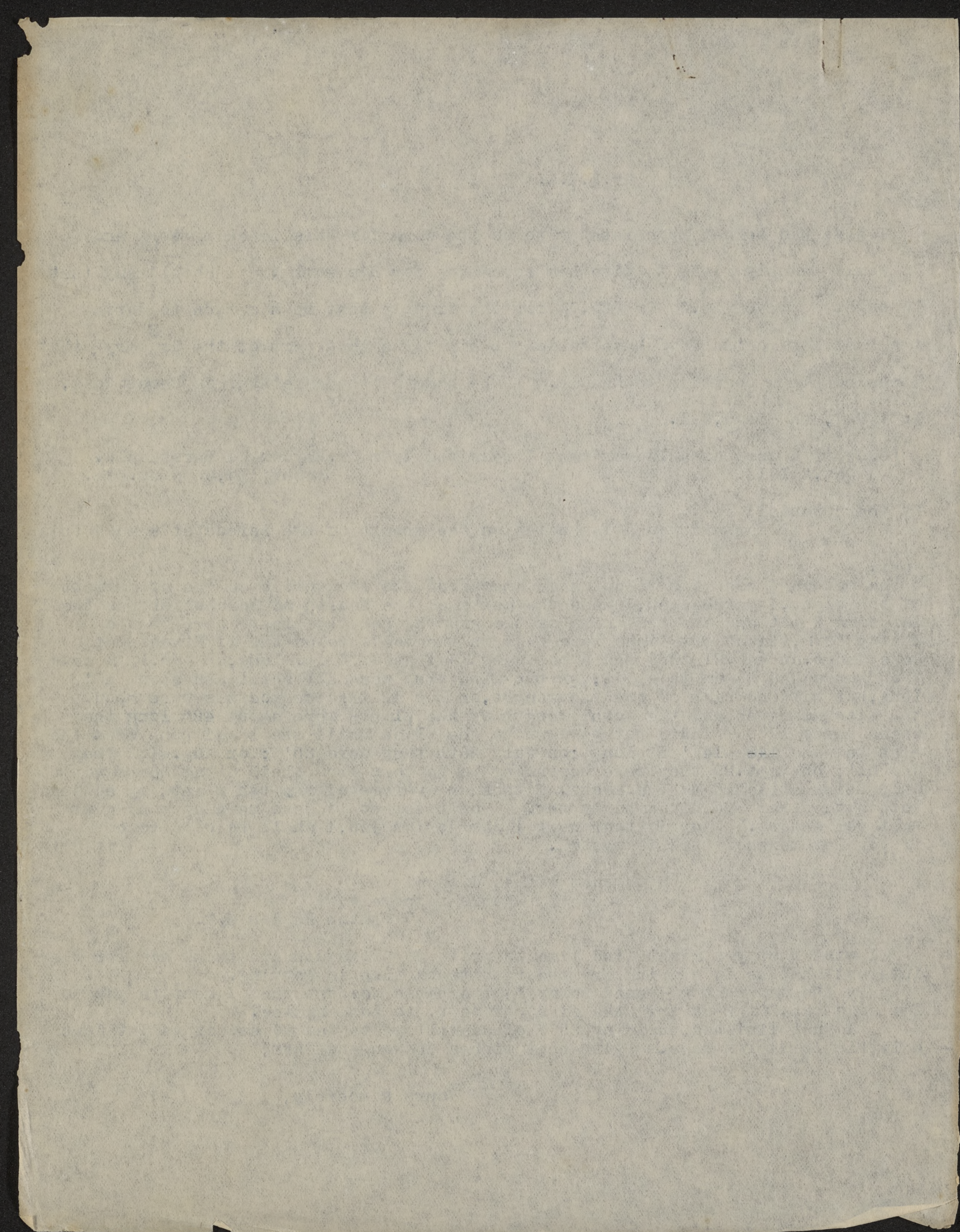
By the way what happened to my last expense account that I sent to you for some \$25.00 for my trip the first of Sept. to Los Angeles?

I just finished building 250' of seawall yesterday so expect to let down a little for a few days. With best wishes to you and Turp,

I am

Yours sincerely,







Oct.15th 1913.

Dr. Frank K. Cameron,

Washington D.C.

My dear Dr. Cameron:

I was up to Los Angeles on personal business a week ago and as I had a little time on my hands I ran down to Longbeach and saw Firman. The other men were out as usual. They were placing the "Doubting Thomas" plant and expected to be running it within a few days. This was the unit factory. They were placing the kiln and had their various vats in place when I got there. The fishscrap and kelp plant was not in shape as the new machinery had not arrived. The building was completed however. They had put up a mess house since my last visit. In the times the other day there was a notice that the "Doubting Thomas" demonstration plant was in working order and that there would be a demonstration of the methods and results yesterday to members of the Los Angeles Chamber of Commerce and The Mining Bureau. They didn't send any invitation to me but I will assume one about the 7th or 8th of next month so as to give them a real good chance to really get started and then we can see how they are coming out. The present unit to my mind is a stock selling game. They didn't sell the bonds that they expected to and need ready cash now I suspect to carry on their work.

The Pacific Kelp Mulch Co. is still in the game at the Terminal Island stand. They are sacking their wet kelp and selling it in that form. They do not have a Los Angeles office anymore. I could not catch them the other day. In fact they seem to not be on the job all the time but they are still in existence. I am sorry that I had the Mexican trouble just as Turn got here for it



WALLACE COMPANY

1913

WALLACE COMPANY

1913



FLR

UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

ADDRESS ALL COMMUNICATIONS TO  
"CHIEF, BUREAU OF SOILS."

October 20, 1913.

Dr. Cameron:

We will be unable to pay Mr. Ross a lump sum of \$20 or \$25 for miscellaneous work rendered during the past summer. Mr. Crandall was not authorized to incur expenses of this character, but if he has done so, he should obtain receipts covering the hours or days on which Mr. Ross rendered services, indicating the character of the service rendered and rate per hour or day, and submit same in a reimbursement account. It will then be necessary to request a waiver in order to allow payment. Mr. Crandall's reimbursement account was certified for payment on October 7th in the sum of \$22.64.

Respectfully,

*Caw*



October 7th in the sum of \$22.54.  
Crane's reimbursement account was certified as correct  
and amount same in a reimbursement account. It will be  
the character of the service rendered and will be  
hours or days on which Mr. Rose rendered service.  
but if he has done so, he should obtain receipts  
Crane's was not authorized to incur expenses of  
for miscellaneous work rendered during the period  
We will be unable to pay Mr. Rose's invoice for

Respectfully,



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

FKC/D

October 23, 1913.

Mr. W. C. Crandall,  
University of California,  
La Jolla, Calif.

Dear Crandall:

I have received your letter of October 12, with the notes regarding the leaching of kelp, and Merz is going ahead with the analyses.

I have noted with a great deal of interest your letter from Dr. Haydon. I am writing to the Doctor, thanking him for his interest and will enclose a copy of my letter to him.

I have been trying to see some way of arranging for the remuneration of Mr. Ross. It seems to me that you are correct, and that we ought to pay him for his trouble, but our trouble is to find the way to do it under the existing regulations. Our disbursing officer has been puzzling over the matter for me, and I enclose his official memorandum on the subject.

I have also noted with great interest the results of your visit to Los Angeles, as set forth in your letter of the 15th. Turrentine could not find any evidence of the existence of the Pacific Kelp Mulch Co., and I am glad to



October 12, 1944

Mr. J. H. Kinsley,  
University of California,  
La Jolla, Calif.

Dear Mr. Kinsley:

I have received your letter of October 12, with  
the note regarding the location of Kelp, and have in mind  
the subject.

I have noted with a great deal of interest your  
letter from Dr. Haddon. I am writing to the doctor, thinking  
that you are interested in the same subject as my letter.

I have been trying to see how we can arrange  
for the investigation of Mr. Haddon. It seems to me that you  
are interested, and have an effort to get him into the trouble,  
but we must find the way to do it. It is the ex-  
perimental. Our laboratory officer has been possible  
to get the doctor for us, and I enclose his official memorandum  
in the subject.

I have also noted with great interest your letter  
regarding the location of Kelp, and have in mind the subject.  
The fact that the Kelp is located in the same place as the  
Kelp of the Kelp, and the Kelp of the Kelp, and the Kelp of the Kelp.



hear that they are still doing business. Our fertilizer journals in the East keep noting the formation of new companies, but where they get their dope is beyond me. I do not think it would be amiss to call the kelp matter to the attention of Mr. Kettner.

The situation as regards the publication of the maps by the Department is unchanged. There is a possibility that I may be able to arrange that one of the technical societies publish them, and I am expecting to have an interview with the managing director of one of these societies in a few days. He wishes me to write an article on kelp, to be very fully illustrated and gotten up in a popular style, and I am willing to do this if he will publish the maps.

Professor Frye of the University of Washington is here now, working on his report of the summer's work. Rigg's report came in a day or two since and he did very excellent work, but Frye's work was remarkable, both in character and extent, supplementing yours so far as the maps go in a very satisfactory way indeed. It will be most unfortunate if some means are not found to publish this work.

I am anxious now to try some experiments on coagulating the protoplasm of the kelp with a view to working out a practical method of leaching the salts from the organic residue without at the same time removing any of the nitrogen, and for this purpose we will need some fresh kelp.



mean that they are still doing business. Our last letter  
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panies, but where they get their jobs is beyond me. I do  
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some means are not found to publish this work.

I am anxious now to try some experiments on de-  
termining the protoplasm of the help with a view to carrying  
out a practical method of feeding the seeds from the  
organic residue without at the same time removing any of the  
nitrogen, and for this purpose we will need some fresh help.



I wish, therefore, that as soon as you can conveniently arrange to have it done, that you will have about a dozen quart fruit jars of fresh kelp shipped to us, as I am anxious to start one of the men at work on it as soon as possible. There is a bare possibility that Congress may decide to continue the work in an experimental factory for the production from kelp of pure potash salts, and I wish to be ready for them.

Sincerely yours,

FRANK K. CAMERON,

*Frank K. Cameron*  
In Charge.

P. S. Lord Percy has advised me that he will write to you personally and give you specific instructions how to address him in the future.

Enclosure.



11  
I wish, therefore, that as soon as you can conveniently  
arrange to have it done, that you will have about a dozen  
quart first jars of fresh help shipped to us, as I am anxious  
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Sincerely yours,

FRANK K. CAMERON,  
In Charge.

F. S. Lord Percy has advised me that he will write to you  
personally and give you specific instructions how to  
address him in the future.

Enclosure.



No. \_\_\_\_\_

Subvoucher for Special Conveyances, Supplies, Miscellaneous  
Expenses, and Services other than Personal.

Department of Agriculture,

To James Ross, Dr.

Address: Lafolla, Cal.

Date of Payment \_\_\_\_\_, 19 \_\_\_\_

BUT ONE SIDE OF THIS FORM TO BE USED.

For services as fol-  
lows, in assisting  
in drying and  
sawing for kelp:

Aug 9 - 1 1/2 hrs

" 10 - 1 1/2 "

" 11 - 1/2 "

= hours @ 50¢ per hr =

etc for each  
month.

TOTAL, - - - - - \$

TO BE COMPLETELY FILLED IN BY PAYEE, OR BEFORE SIGNATURE BY  
PAYEE, WITHOUT ALTERATION OR ERASURE AT ANY TIME.

Received in Cash this \_\_\_\_\_ day of

\_\_\_\_\_, 19 \_\_, from

\_\_\_\_\_, the sum of

\_\_\_\_\_ dollars, in full of

100

the above account, which I certify to be correct.

NOT TO BE SIGNED  
IN DUPLICATE.

James Ross

Title \_\_\_\_\_



**Form 4 A.**

Approved by Comptroller of Treasury  
August 16, 1907.

**SUBVOUCHER FOR MEALS AND LODGING.**

NOT TO BE FURNISHED IN DUPLICATE.

No. \_\_\_\_\_



City or Town, \_\_\_\_\_

Name of Hotel, \_\_\_\_\_

Date, \_\_\_\_\_

(TO BE COMPLETELY FILLED IN BY PAYEE, OR BEFORE SIGNATURE BY  
PAYEE, WITHOUT ALTERATION OR ERASURE AT ANY TIME.)

Received in Cash of \_\_\_\_\_,  
Department of Agriculture, \_\_\_\_\_ and  $\frac{\quad}{100}$  DOLLARS, for  
MEALS and LODGING from \_\_\_\_\_, 19\_\_\_\_, to  
\_\_\_\_\_, 1\_\_\_\_, inclusive.

IF CHARGE FOR FRACTIONAL PART OF DAY  
IS GREATER IN PROPORTION IT MUST  
BE EXPLAINED.

Time covered, \_\_\_\_\_ day, at \$\_\_\_\_\_ per day.

I certify the foregoing to be correct.

(Signature) \_\_\_\_\_

NOT TO BE SIGNED IN DUPLICATE.  
BUT ONE SIDE OF THIS FORM TO BE USED.

8-186 a

(Title) \_\_\_\_\_



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

Nov. 12th 1913

Dr. Frank K. Cameron,  
Washington D.C.

My dear Dr. Cameron:

In looking over the statement of the "Disbursing Officer, I am uncertain as to the exact method of procedure for paying Mr. Ross. Should I pay the account and put it in as a reimbursement for my fund or should it be put in as a direct reimbursement for Mr. Ross?

Here is the account:

Aug. 9th  
10  
11  
12  
14  
15  
16  
17  
18

1 1/2 hr.  
1 1/2  
1 1/2  
1 1/2  
1 1/2  
1 1/2  
1 1/2  
1 1/2  
3

Packing samples.

Sept. 27  
28  
29  
30

3 hrs.  
2 1/4  
1 1/2  
1 1/2

Nov. 1  
2  
3  
4

1 1/2  
1 1/2  
1 1/2  
1 1/2

5 Making packing box and packing.

22 3/4

@50¢

\$11.37

The above is a correct statement of the work that I did for the taking care of kelp during Aug. and Sept. of 1913.

*James Ross*

Ross has been my main stay in helping me out in the kelp drying and caring for it ever since I took the work but on the last trips of the Boat he has done all the actual work as I was unable to be with the Boat. We have had the use of the Boat without cost to the Dept. and I think it would be but fair to give Mr. Ross something for his trouble as I know that he has had to work very long hours at times in order that he could help me out.

Yours truly,

*W. C. Candall*

6 1/2  
8 1/4  
7 3/4

3.25  
3.87  
4.12  
11.24

22 1/2

7.50  
3.87  
11.37

37  
3.50







Nov. 12th 1913

Dr. Frank K. Cameron,  
Washington D.C.

My dear Dr. Cameron:

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Aug. 9th	1 1/2 hr.	
10	1 1/2	
11	1 1/2	
12	1 1/2	
14	1 1/2	
15	1 1/2	
16	1 1/2	
17	1 1/2	
18	3	Packing samples.
Sept. 27	3 hrs.	
28	2 1/2	
29	1 1/2	
30	1	
Nov. 1	1 1/2	
2	1 1/2	
3	1 1/2	
4	5	Making packing box and packing.
	<u>22 1/2</u>	@50¢ \$11.37

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Ross has been my main stay in helping me out in the kelp drying and caring for it ever since I took the work but on the last trips of the Boat he has done all the actual work as I was unable to be with the Boat. We have had the use of the Boat without cost to the Dept. and I think it would be but fair to give Mr. Ross something for his trouble as I know that he has had to work very long hours at times in order that he could help me out.

Yours truly,

*W.C. Braudett*



THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION



Nov. 12th 1913.

Dr. Frank K. Cameron,  
Washington, D.C.

My dear Dr. Cameron:

I spent Friday, Saturday and Sunday of last week investigating the kelp around San Pedro and Longbeach.

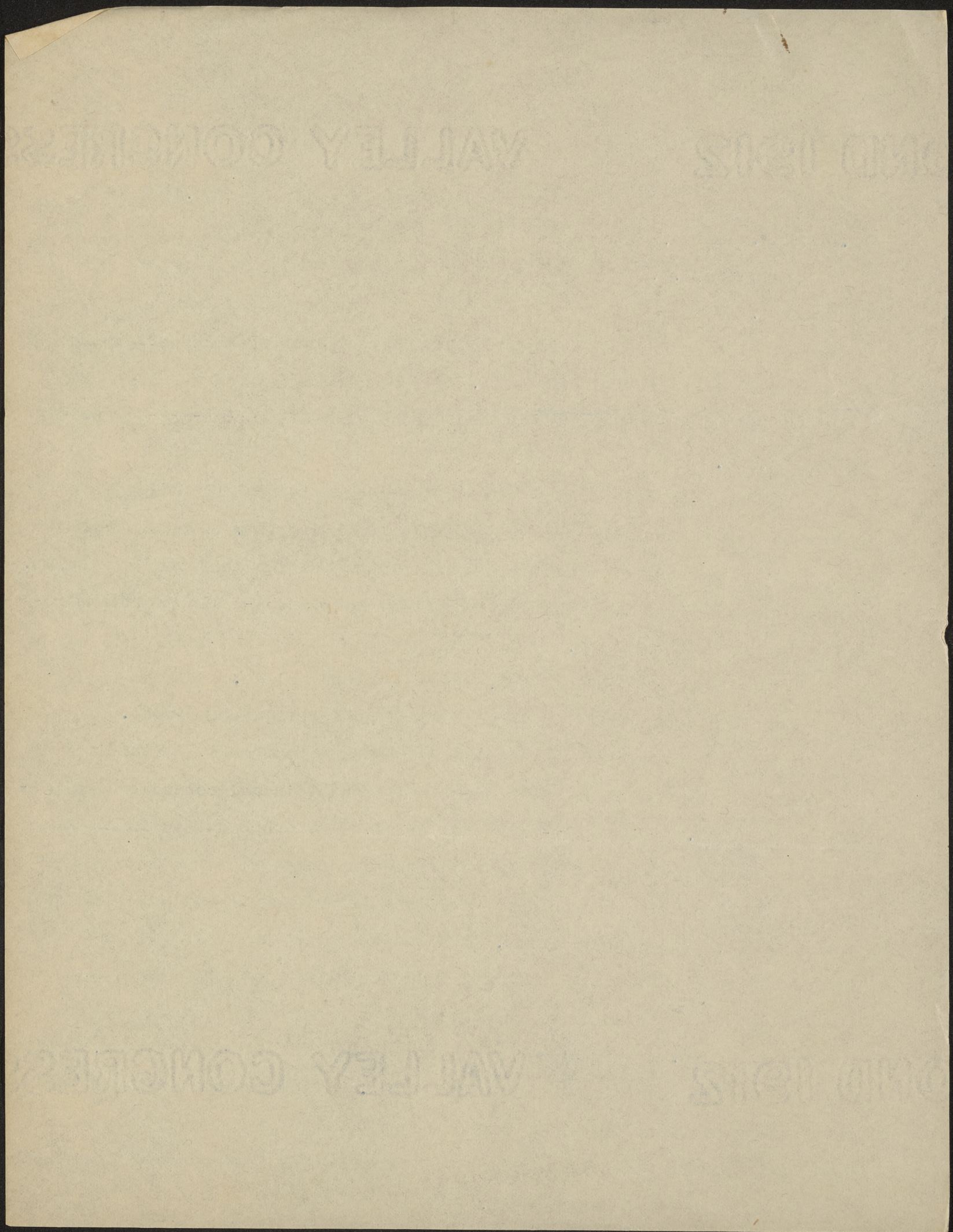
Friday and a part of Sunday I spent with the Pacific-Kelp American Potash Co. Inc.

They have made four runs with their experimental plant but have not worked up the results from a quantitative basis yet. These runs were more for the purpose of testing out the plant than for test runs for salts. Sunday was the first real run that they have made and I will report the results later in the letter.

Equipment; Golden West, 3 C's, and Kelpie.

These boats can bring in about 5 tons each every three hours. The kelp is now simply pulled and handled by means of boathooks. After it is pulled it is stacked up on the deck and brought in and rehandled in landing the same way. The kelp is then dried. At present this is a slow and inefficient process as it is put in the incinerator. The drying surface is small and it is unhandy. Wilson is putting in a plant that is really a big, horizontal radiator. He has taken several thousand feet of 1" pipe and run it back and forth and will run steam through this pipe. There are two sections to the drier and a track for a dump car will run between the two sections. The drying surface is 640 ft for each section. This will dry to 15% according to the Wilson plan. Beaver board will be laid on the tops of these driers to catch the salts that may drop off. The dried weed will then be taken by carriers and taken to the incinerators where they burn it by means of a gas furnace. To



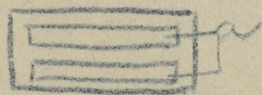
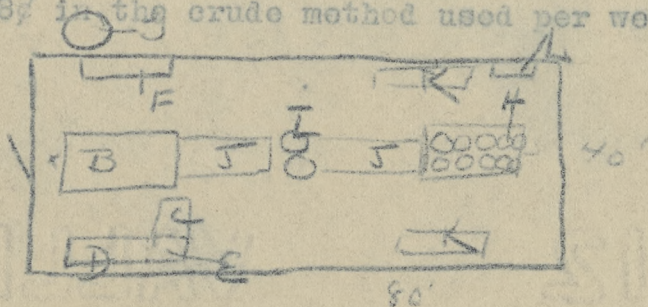




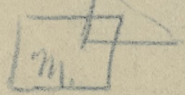
#2.

The smoke from the incinerated kelp is sent up through a flue through a triple set of condensation tubes. These tubes consist of coils of  $2\frac{1}{2}$ " pipe that are placed in vats of water. The water is kept at a given temperature for each vat. In the first condensor they get their tar, in the second creosote, and in the third varnish. After the run on Sunday they were able to draw off substance that looked like tar and creosote but no varnish. However there was a sticky substance that did collect around the flue that lead from #3. This system was being installed on Friday and I saw the work on the trial test on Sunday. There were some leaks and so the results were hard to judge. They expect that they will be in full running order in ten days. Probably if I get around within two months it will be time enough. The incinerated kelp is then either put in a bin or else it is put in the lixiviator. After passing through the lixiviator it is taken to the evaporators and there boiled down. The potassium sulphate is crystallized out first then the temp. is lowered and the chloride is crystallized out. I saw the crystals of the previous tests and these crystals showed a good product. There was probably 500 or 600 lbs. of the salts in sight in the test plant.

Most statistics were available except the harvesting that had cost them 88¢ in the crude method used per wet ton.



a = drying plant.  
B = Furnace on top of which is the incinerator  
"C" is vat which first gets gases from incinerator catches the "tar".





LOREN BOND 1912

VALLEY C

LOREN BOND 1912

VALLEY C



D = 2nd condenser. Lesser Temp <sup>57°C</sup> cycloate  
E = 3rd " abn C. lower temp than D - varnish.

From E gases escape up a flue.

F = storage bin for incinerated materials.

G = Initiator.

H = Evaporators - 5 sets. 50-75 gal capacity.

Under these is gas furnace.

I - Flues for furnace smoke from under incinerator and also from evaporators.

J. Drying tables for salts.

K. Crystallizing vats

L. Saturating test table.

M Landing stage with unguessed derrick on water front.

"N" proposed track for dump car.

All of the above is being exploited for the benefit of the Public yet I was asked to consider it as confidential material. I know that they are using anything to sell stock as I have had inquiries from people here in La Jolla about it. Great promises are made and about 40% on the investment is promised. Firman was down here himself and he was trying to interest some of the school teachers in the proposition. From what I could gather he put the proposition over very much on the line of the old gold bri



VALLEY CONCRETE

BOND 1912

VALLEY CONCRETE

BOND 1912



14/  
brick game. Last Sunday the run was made for a man who is figuring on putting about \$20000. into the plant. He can afford to take a chance on the thing being a great success.

I did not see Wilson to have a talk with him but Friday P.M. I had a long talk with Brander, who is now in Los Angeles, at the Sierra Madre Club. I asked him why they did not try out their small unit first and experiment with it and get things on a stable basis before putting in the 500 ton plant and then having to make changes in that. He personally agreed with me that that was a good plan. He told me however that they had enough money coming in now so that they could put in the large unit. I don't think that they are very definite in their own minds as to just what they want to do. Sunday Firman told me that they were afraid of the present scheme for drying and that they were figuring with a firm on two different plans for drying. They seem to have given up the idea of bringing in the kelp in nets.

The Pacific Kelp Mulch Co. I saw on Saturday and they have undergone some considerable change. Shiner is out of the managership and Deacher is now manager.

They are now drying the kelp in rooms on trays. This dried kelp is then passed through a grinding machine and after being finely ground, is mixed with bone meal and fish scrap. Their resulting formula shows 4% N, 9% phosphates, 8% Potash and 7% lime. This product they are sacking in 5 - 25 lb sacks and are trying to sell it for lawns and flowers. They are also just experimenting and no definite results as to sales are available. They sold 108 cars of the wet kelp before giving up but they never had a repeat order from any of their sales. Their next sale was of the sacked kelp but this was never of any sales value and the other fertilizer men put



DIS

WITTEA CONGRESS FINE

DIS

WITTEA CONGRESS FINE



#5

them out of commission. Also I found out that the Council of Los Angeles forced them to quit having the decaying kelp in the city limits. The present product seems to me to be a reasonable product and although they will be working on a very small scale I think that they have a marketable fertilizer and will make good.

I could find out nothing new about the Pacific Products Co. They may be in a condition of status quo. I will see Balch as soon as possible and see what he knows about the movements of Cheney and Fisher. Cheney did not play fair with me when he was down here last and I am a little suspicious of him.

No new companies are starting in this neck of the woods so far as I can find out but I hear that there is one near Seattle. Also I heard that there was a company in Denver. I have no definite knowledge of either of these however.

As soon as the sea quiets down I will send the kelp that you asked for to you.

Enclose find an account of the work performed by Ross.

Tell Turrentine that the Tuna Factories are all closed down as the run of Albicore is over. It should have lasted until Feb. but has suddenly stopped. The Longbeach Factory cleared about 20 000. on the season.

Enclose find my expense account.

Respectfully submitted,

W. C. Buddall



57  
3.1

7

57  
49.1

17.67

6.60  
1.02  
13.20



UNITED STATES DEPARTMENT OF AGRICULTURE,  
BUREAU OF SOILS,  
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

FKC/D

November 22, 1913.

Mr. W. C. Crandall,  
The Scripps Institution,  
La Jolla, California.

Dear Crandall:

Your letter of November 12 is at hand, and I have read it with the greatest interest.

I am sorry that Firman, Wilson and Company are still pushing things in the unfortunate manner which we all deprecate. It is a pity that Brander, Bell or some of the other men of the company do not take hold of the matter more seriously and insist upon their getting down to actual work. I am also sorry to hear about Cheney's conduct. I imagine Fisher is a better man to deal with. I found him pretty satisfactory when he was here, although of course he wanted us to do things which we could not possibly do. We very strongly urged him when he was here to get in touch with Balch and inform Balch of his plans for the future, as we think the old gentleman is entitled to something for his pioneer work. But this advice we also gave to the other people in Los Angeles.

The company of which you have heard in Denver is,



November 22, 1913.

Mr. W. B. Grandall,  
The Briggs Lumber Co.,  
La Jolla, California.

Dear Grandall:

Your letter of November 12 is at hand, and I have  
read it with the greatest interest.

I am sorry that E. W. Wilson and Company are  
still pushing things in the unfortunate manner which we all  
deprecate. It is a pity that Frederick, Bell or some of the  
other men of the company do not take hold of the matter more  
seriously and insist upon their getting down to actual work.  
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The company of which you have heard in Denver is



I think, a concern which tries to exploit patents. As you may recall, Moore and I got out one patent for the extraction of potash from kelp by the electrolytic process, which, so far as I am aware, has not the slightest commercial value. Nevertheless, this concern offered me a pretty good price for my patent, but as the patent belongs to the people of the United States, there was nothing doing.

"Turp" is obliged for the information about the Tuna factories.

Your expense account was turned over to our finance clerk with my o.k. and I presume you will get your money before very long. I have turned over to him also the Ross account, and he is expecting to write to you in a day or two concerning it but I am not informed what he has in mind, since I have been obliged to be away from the office a good deal the last few days on account of the meetings of the Conservation Congress and other associations that have been in town.

Things seem to be going a little bit more smoothly here as regards the prospects of kelp work, but nothing definite has occurred yet beyond the promises of some Congressmen to put through a bill shortly carrying an appropriation for the publication of our past work.

Sincerely yours,

FRANK K. CAMERON,

In Charge.



11/10/11

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may recall, Moore and I got out one patent for the ex-  
traction of potash from kelp by the electrolytic process,  
which, so far as I am aware, has not the slightest commercial  
value. Nevertheless, this concern offered me a pretty good  
price for my patent, but as the patent belongs to the estate  
of my late father, I have not yet decided whether  
"Lump" is obliged for the information about the

Thus factories.  
Your expense account was turned over to our  
finance clerk with my O.K. and I presume you will get your  
money before very long. I have turned over to him also the  
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tion for the publication of our past work.

Sincerely yours,  
FRANK K. CANNON  
In Charge.



THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LOCATED AT LA JOLLA  
NEAR  
SAN DIEGO, CALIFORNIA

LA JOLLA, CALIFORNIA,

Nov. 25th 1913

Dr. Frank K. Cameron,  
Washington, D.C.

My dear Dr. Cameron:

I am sending to you by express today 6-2 qt. mason jars of kelp taken this morning from the beds for your leaching experiments and asked for by you in y ur last letter. This is from La Jolla, Station #3. It was taken from the water and placed immediately in the jars while we were on the beds.

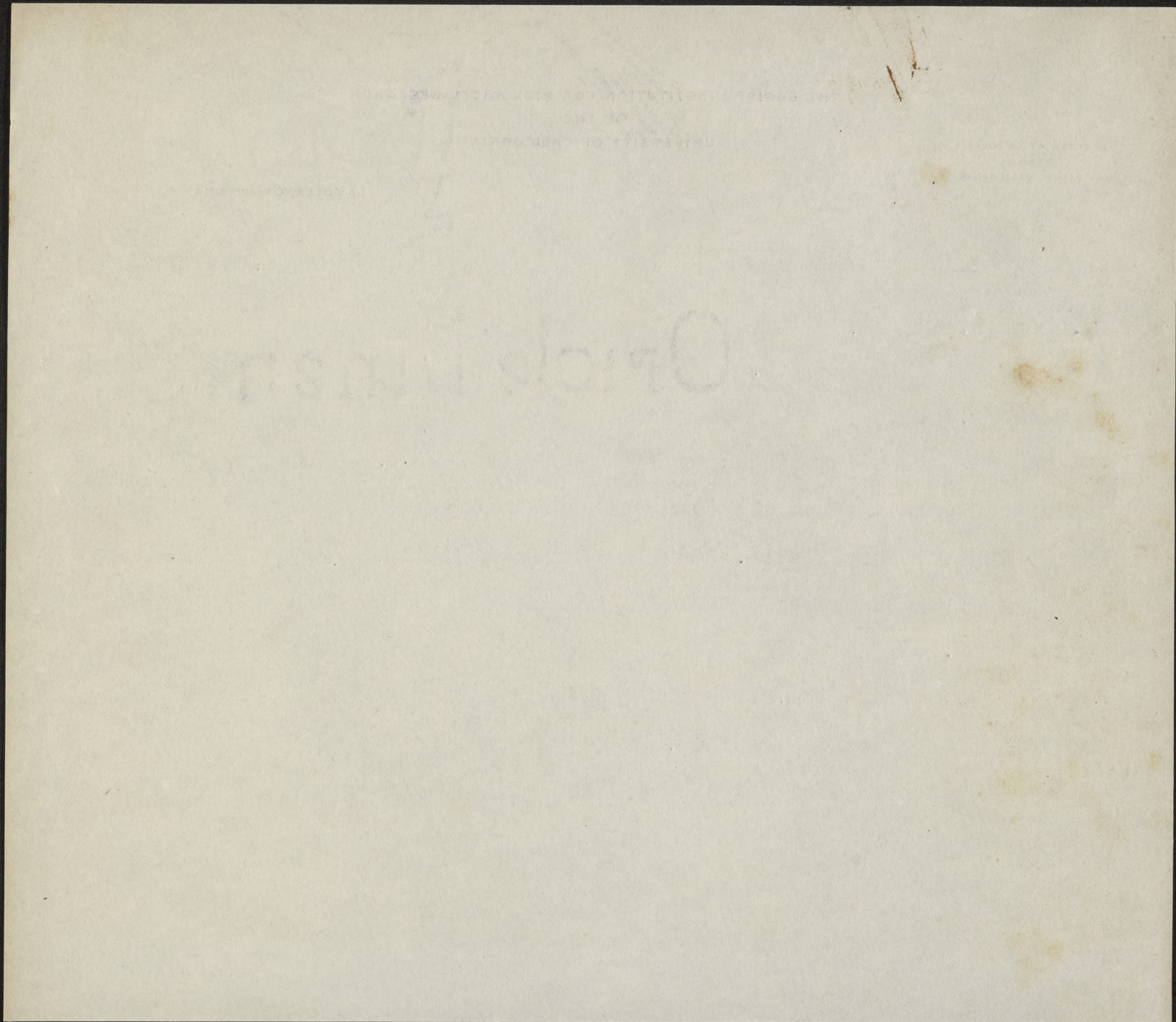
I saw the Hon. Kettner and he will take up the printing matter and see what he can do about it.

With best wishes to you and the "Duke" his Lordship."

Yours truly,

*W. C. Caudall*







LOCATED AT LA JOLLA  
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SAN DIEGO, CALIFORNIA

THE SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH  
OF THE  
UNIVERSITY OF CALIFORNIA

LA JOLLA, CALIFORNIA,

Dec. 2nd 1913.

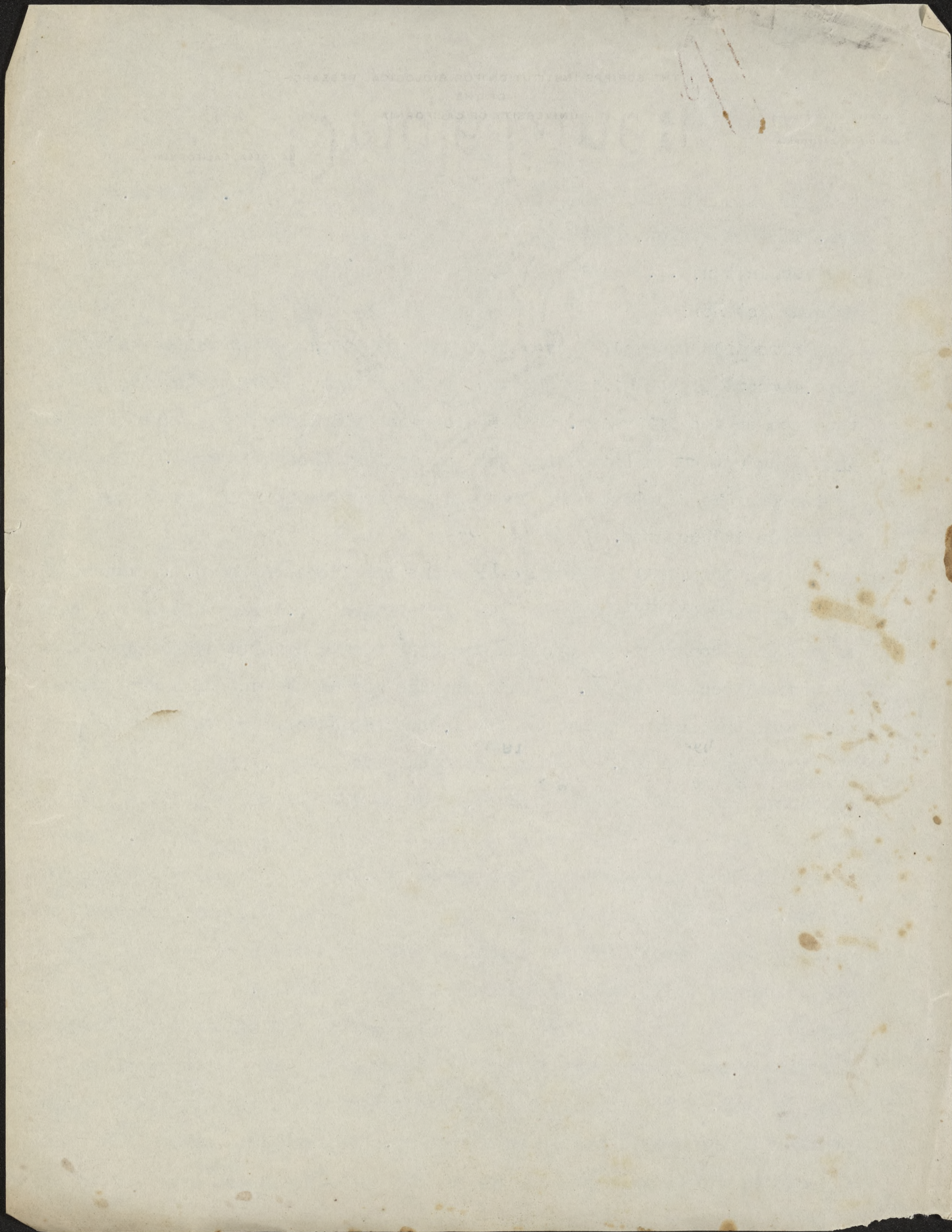
Hon. William Kettner,  
Washington, D.C.

My dear Kettner:

As regards the Kelp Survey that I spoke to you about while you were here, I wrote to you giving you the best man that I know of to give you all the dope on the situation. There are some things about the Washington end that I am not up on but he has been up against the whole game. That man is the one who conceived the idea and was instrumental in working it out as far as it has gone.

Dec 18th, 1911 a "Message from the President of the U.S. transmitting a letter from the Secretary of the Agriculture etc." was sent to the Senate of the 62nd Congress, 2nd session and was ordered printed and became known as Senate Document # 190. This message was in the way of a preliminary report and during the summer of 1912, Congress authorized the completion of the work then started. As a result of this action, I was detailed to charter a boat and proceed to chart, describe and get all available knowledge about the Kelp Beds from San Diego, Cal to Puget Sound, Washington. For this purpose I chartered the "Paxinosa", Col. Raders boat and about the 15th of Aug. 1912, I left on the work. The work took 48 days and a complete set of maps and a report on the general character of the work was then sent to the Bureau of Soils, Dept. of Agriculture at Washington. At that time the maps were made for a document that would take up and make a complete report. For some reason, these maps have been pigeon-holed and all the work that was done is lost. Besides the information contained is not available to the people who are interested in this problem. I have been asked many times for copies of the report which the people along the Coast were led to expect.







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NEAR  
SAN DIEGO, CALIFORNIA

#2. Hon. W.K.

LA JOLLA, CALIFORNIA,

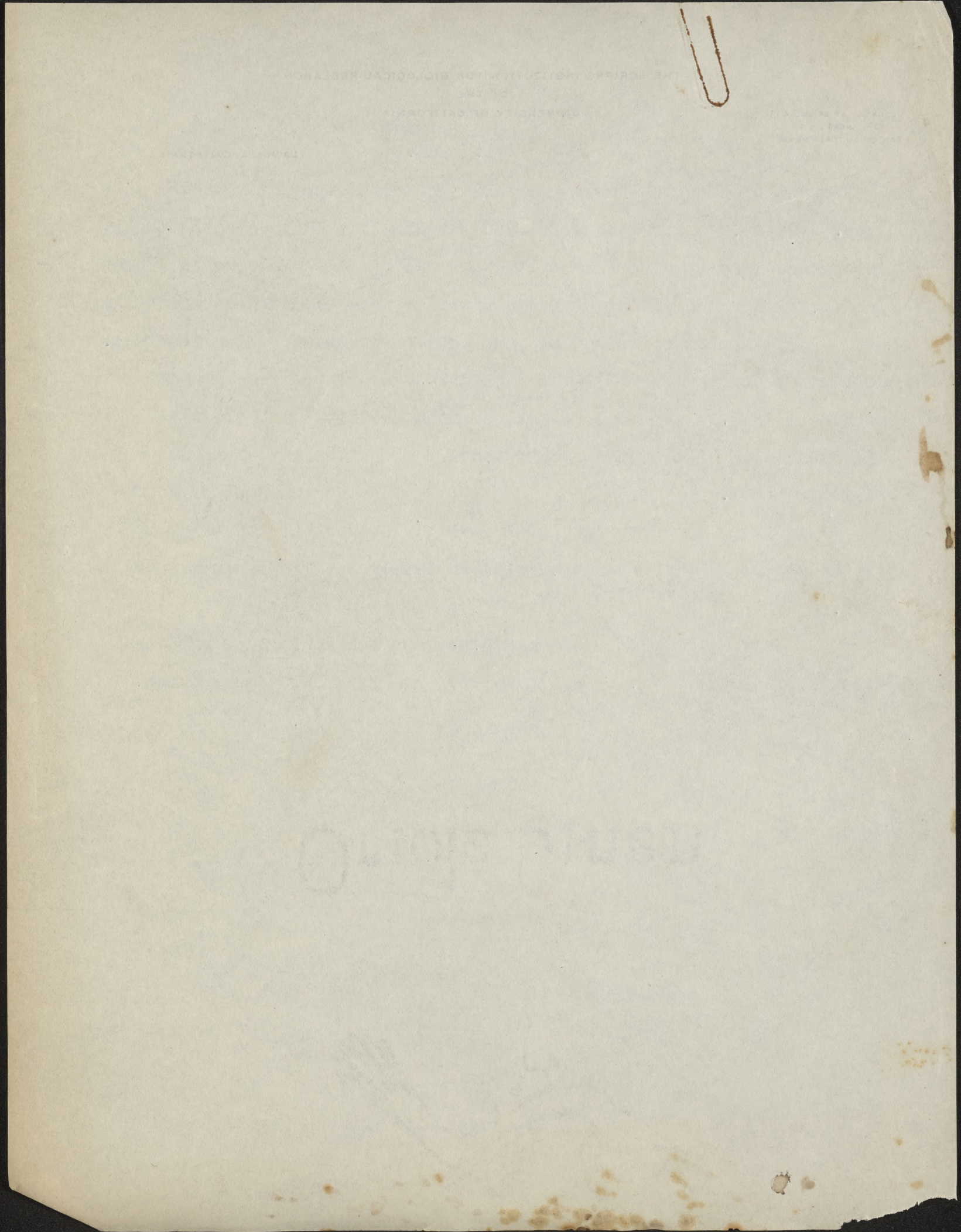
account of the problem and the wide interest expressed in such an expedition. Those, who are interested are divided into three classes, namely those formed interested in companies that are now or expect to be interested in such companies, farmers and nursery men who expect to use the kelp as a fertilizer, and a large number of scientists and people who study public problems. It does not seem right that all of the work together with the results gained should be lost. Not only are these maps held up but there is the work done this year along the Alaskan Coast where two parties have been at work in a similar manner.

If there is anything that I could do to further the bringing about of the printing of these maps, I will certainly be glad to jump into the harness.

Give my best regards to Mrs. Kettner and don't go so hard that you will break down in the work. We really need you after you are through.

Yours sincerely,







WILLIAM KETTNER  
11TH DISTRICT CALIFORNIA

CALIFORNIA ADDRESS:  
219 TIMKIN BUILDING  
SAN DIEGO  
WASHINGTON ADDRESS:  
237 HOUSE OFFICE BUILDING

HOUSE OF REPRESENTATIVES  
WASHINGTON

December 22, 1913.

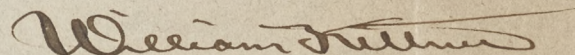
My dear Mr. Crandall:-

Mr. Cameron came up to see me one evening, we had a long talk and the result was the bill, of which I sent you a copy the other day. This is the same as the bill introduced in the Senate by Senator Poindexter, where it was sent to the Appropriations Committee. My bill was referred to the Agricultural Committee where there is more hope that it can be sandwiched through as part of the regular Agricultural appropriation, especially as I have some very good friends in this Committee who will help in every way possible. The next thing now is to secure a favorable report from the Secretary of Agriculture or his assistant, and this is where we will have to use all the persuasive powers we can "get busy."

Your letter will be of use in making the plea before the Committee.

Hoping you have a pleasant vacation, I am,

Yours sincerely,



Mr. W.C. Crandall,  
Scripps Biological Station,  
La Jolla, Calif.



HOUSE OF REPRESENTATIVES

WASHINGTON